ESRAR-0027
E-POSTER VIEWING

CENTRAL NERVE BLOCKS
COMPARING RESISTANCE TO WATER FLOW BETWEEN TWO SPINAL NEEDLES
Al-Ani T. Queen Elizabeth University Hospital, Anaesthesia, Glasgow, United Kingdom.
Background and Aims: This study compares resistance to water flow between the newly introduced Pajunk Sprotte® NRFit 25G × 90mm spinal needle and our department previously used Vygon Whitacre 25G × 90mm spinal needle.
Methods: Fifty-five ward nurses who have never used these needles before were recruited to use both needles in a simulated practice. Each needle was primed with water then attached to 5 ml syringe containing 2 ml water. Using the same hand, each nurse was asked to aspirate 1 ml from a glass filled with 10 ml water and then injects 3 ml under the water in the same glass. Unlimited attempts were permitted until they were able to determine if there is a difference in resistance between the two needles or not. The following data were recorded: 1) The needle with the lowest resistance to aspiration and injection 2) The number of aspiration and injection attempts. Participants were not aware which needle is the newly introduced spinal needle.
Results: The majority of the participants felt that there is less resistance to aspiration and injection when using the Pajunk Sprotte NRFit compared with the Vygon Whitacre needle (Figure 1).

Figure 1: Resistance to aspiration and injection

The majority of participants were able to determine the difference in resistance in one attempt (72% of participants for aspiration and 74% for injection). The maximum number of attempts was three.
Conclusions: Practitioners who have recently switched to the use of Pajunk Sprotte® NRFit 25G × 90mm from Vygon Whitacre 25G × 90mm spinal needle need to be aware of the higher resistance to flow on aspiration and injection.

ESRAR-0106
E-POSTER VIEWING

CENTRAL NERVE BLOCKS
MOTOR-SPARING SPINAL ANESTHESIA TO ALLOW ACTIVE BALANCING DURING TOTAL KNEE ARTHROPLASTY
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Background and Aims: Successful total knee replacement (TKA) is dependent on balancing peak load at the medial and lateral tibiofemoral joint interfaces. This can be achieved using a sterile sensor system intra-operatively. On the request of one surgeon at our institution, we explored the feasibility and safety of spinal anesthesia with limited motor blockade.
Methods: 25 patients were enrolled in an IRB-approved non-randomized pilot study. For spinal anesthesia, a solution consisting of 1 mL of 5 mg/mL isobaric bupivacaine with 1.5 mL sterile saline solution containing 7.5 mcg of sufentanil was administered. During surgery, after components were cemented, patients were awakened and asked to move their leg in order to measure pressure balance. If an imbalance was noted, the surgeon would test active pressure balance. A randomized operative wake up test, we can allow surgeons to test active pressure balance. As we reduced the local anesthetic volume to 0.8 mL in patients shorter than 160 cm, that issue was eliminated. One patient had neutral recollection of the motor test on follow up. No patient had pain or other side effect.
Conclusions: A spinal anesthetic using sufentanil in combination with low-dose local anesthetic appears feasible and safe to provide surgical anesthesia for TKA. By performing a motor-sparing spinal anesthetic with an intra-operative wake up test, we can allow surgeons to test active pressure balance to improve the accuracy of the pressure balancing technique. A randomized study is in preparation to determine whether long-term surgical result is improved.

ESRAR-0201
E-POSTER VIEWING

CENTRAL NERVE BLOCKS
THE DIRECTION OF THE BEVELS OF THE INTRODUCER AND THE CUTTING SPINAL NEEDLE DOES NOT AFFECT THE FREQUENCY OF PARESTHESIA - A PROSPECTIVE RANDOMIZED STUDY
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Background and Aims: Deviation of the spinal needle leads to technical difficulties and can cause neurological complications. The aims of this study are, first, to verify in clinical conditions the results from in vitro studies that the deviation of the cutting type spinal needle depends on the mutual position of the bevels (its own and that of the introducer); and second, to compare the incidence of paresthesia with two access - median or paramedian.
Methods: 210 patients, aged ≥ 18 years, presented for elective surgery were included in a prospective randomised study. Spinal anesthesia in all patients was performed in a lateral position with 88 mm 25G Quincke with 38 mm 20G introducer at L2-3, or L3-4. Paresthesia and the number of attempts have been documented. Patient Randomization is a web-based Mersenne Twister algorithm at a 1:1 allocation.
Results: A total of 13 cases (6.19%) were reported. The distribution with the parallel and opposite position of the bevels is: 6 cases (5.71%) and 7 cases (6.67%) respectively. In median access, patients without paresthesia had an average of 1.21 attempts, and those with paresthesia - 2 attempts. Patients with paramedian access were 1.67 and 2.25, respectively. Both differences were statistically significant, p < 0.0001.
Conclusions: When performing spinal anesthesia, the mutual position of the two bevels, in parallel or opposite, does not lead to clinically significant deviation of the needle and does not affect the incidence of paresthesia. The incidence of paresthesia in spinal anesthesia does not depend on the type of access (median or paramedian).
ESRA8-0028
E-POSTER VIEWING

CENTRAL NERVE BLOCKS

RETROSPECTIVE STUDY OF 318 CONTINUOUS SPINAL CATHETERS OVER A 9 YEAR PERIOD IN A SINGLE TERTIARY INSTITUTION

Au Yong P.S., Singapore General Hospital, Department of Anaesthesia and Intensive Care, Singapore, Singapore.

Background and Aims: Continuous spinal anesthesia (CSA) is an underutilized anesthetic technique. Our objectives were to evaluate the use of CSA in our institution, its efficacy, ease to use and safety over the nine-year period.

Methods: This was a retrospective analysis conducted in a tertiary center. Records of all patients who underwent surgery and received CSA between December 2008 and July 2017 were reviewed. Their demographic profiles, type and duration of surgery were analyzed. The outcomes measured were the success of CSA, technical evaluation and difficulties encountered, intraoperative hemodynamic, usage of vasopressors, and any reported complications.

Results: 318 patients (94%) successfully underwent surgery using CSA. 20 cases failed to complete the operation under CSA thus requiring conversion to general anesthesia. Patients who had an initial intrathecal local anesthetic (LA) volume of 1.5 ml or more were 2.78 (OR 95% CI 1.70-4.57) times more likely to have hypotension as compared to those who had less than 1.5 ml (p < 0.001). The likelihood was higher in the high-risk group, with odds ratio, OR of 3.60 (95% CI 2.00 – 6.48; p<0.001). There were no reported post-dural puncture headache, neurological sequelae or infection.

Conclusions: CSA is a useful technique for various types of surgeries with high success rate. Our study supports the use of lower initial intrathecal LA below 1.5 ml especially in fragile, high-risk patients.

ESRA8-0333
E-POSTER VIEWING

CENTRAL NERVE BLOCKS

ASSESSMENT OF EPIDURAL DEPTH BY ULTRASOUND IN TRANSVERSE PLANE AND ITS CORRELATION WITH CONVENTIONAL LOSS OF RESISTANCE TECHNIQUE IN INDIAN PATIENTS: A PROSPECTIVE OBSERVATIONAL STUDY

Bhatia R., Department of Anaesthesia and Pain Management, Himalayan Institute of Medical Sciences, Dehradun, India.

Background and Aims: The objective of the present study was to evaluate the skin-epidural space distance as assessed by ultrasound and conventional loss of resistance (LOR) technique and to find out the correlation between body mass index (BMI) and skin to epidural space distance.

Methods: 98 patients of either sex, ASA I/II, BMI <30kg/m² requiring lumbar epidural for surgery were enrolled. At the level of L3-4 intervertebral space epidural depth was assessed with Ultrasound in transverse plane utilizing 2-5 Mhz curved probe. Thereafter epidural depth was assessed with conventional loss of resistance method and the depth measured after needle withdrawal. Any change in needle direction or change of space was noted.

Results: The patients were demographically similar. Depth of epidural space noted by Ultrasonad (UD) was 3.96 ± 0.44cm (range 3.18 - 5.44cm) while Needle depth (ND) was 4.04 ± 0.52cm (range 2.7 - 5.7cm). The Pearson correlation coefficient (r) between UD and ND was 0.935 (95% CI: 0.72–0.92, r² = 0.874, P< 0.001), while Bland-Altman analysis revealed the 95% limits of agreement were -0.494 to 0.652 cm.

Conclusions: The present study demonstrated good correlation between UD and ND and it shows that the preprocedural ultrasound imaging in transverse plane provides more accurate puncture site with a higher success rate in single attempt for lumbar epidurals irrespective of the weight of the patient BMI <30kg/m².

ESRA8-0503
E-POSTER VIEWING

CENTRAL NERVE BLOCKS

A CLINICAL EXPERIENCE OF TITRATED DOSE OF ROPIVACAINE 0.75% IN UROLOGIC DAY CARE SURGERY

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Background and Aims: The ideal spinal anaesthetic for ambulatory settings has quick onset, short duration and minimal side effects. Perceiving delayed discharge, undesirable side effects, have limited the acceptance of day case surgery. We employ spinal anaesthesia for over 50% of short acting urinary procedures. We surveyed our titrated low dose spinal for day case urological patients: the dose, time to recovery and any immediate side effects.

Methods: This service evaluation does not require ethical approval. After informed consent 53 elderly patients ASA II, III were included.

We performed spinal anaesthesia with ropivacaine 0.75% in single dose L3 – L4 space in different doses: 1.6 ml for time surgery<30 min. and 1.8 ml for time surgery>60 min. Also we added 0.3 dextrose 35% ( hyperbaric solution) for the rapid onset and 0.3 ml fentanyl for the improvement of the quality of analgesia. After the administration we put the patient in Trendelenburg position and checked the level of sensory block every 30 sec. After the desirable level (in most cases T8) we put the patient in zero position.

Results: All patients had sensory block without motor block.

There were not any disturbances in hemodynamic variables and there was not a need for additional drugs, like sedative or inotropic.

The discharge of patients from the recovery room was very rapid.

Conclusions: It is important to improve the quality of work using the usual topic anaesthetic drugs, like ropivacaine in titrated doses. In this way, we secure the comfort of the patient and the qualitative function of Post Anaesthetic Care Unit.

ESRA8-0220
E-POSTER VIEWING

CENTRAL NERVE BLOCKS

SPINAL TCI: SCIENCE FICTION OR FUTURE?

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Background and Aims: For the past few years, continuous spinal anesthesia has proved to be the first choice technique for femoral traumatology in elderly and high-risk patients.

In the preexisting studies about continuous spinal anesthesia local anesthetics were administered, using small additional boluses. We assume that local, fast onset and short-acting anesthetics such as hyperbaric prilocaine are more manageable and effective molecules to achieve this technique through continuous infusion. We describe a continuous spinal infusion of hyperbaric prilocaine in a high risk patient undergoing femoral-popliteal by-pass.

Methods: After obtaining the consent, the patient was placed in the lateral position with the side to be anaesthetized facing up. L2-L3 intervertebral space was identified, supported by ultrasound scanning.

In an aseptic field, a subarachnoid catheter was placed. 2% hyperbaric prilocaine was administered at rising doses of 0.5 ml every 5 minutes. After administering 2 ml the metameres from L1 to S3, of the declivous side, were involved. The patient was placed on the operating table maintaining the Trendelenburg position of 20° and bank angle of 15°.

Continuous infusion of 2% hyperbaric prilocaine started at 0.5 ml/h through an electronic pump.

Results: Vital signs remained stable during all the phases of the surgery. The surgery ended about 5 hours from the catheter placement and selective spinal anesthesia was maintained.

Conclusions: Continuous spinal anesthesia with prilocaine ensures side selectivity and hemodynamic stability, as continuous infusion of short half-life drugs reduce their overdosing, similarly to intravenous anesthetics used in TCI mode.
PARAVERTEBRAL CATHETERS (PCS) FOR RIB FRACTURES: A CASE SERIES

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Background and Aims: Respiratory complications after rib fractures cause significant morbidity and mortality. Good analgesia is essential for adequate tidal volume, cough, and chest physiotherapy. Thoracic epidural is considered the gold standard technique. However, there is evidence suggesting PCs are as effective with fewer side effects and complications. This small study aims to evaluate the analgesic benefit provided by PCs for patients with rib fractures admitted to a large district general hospital.

Methods: Fifteen patients having PCs inserted by block-room anaesthetists over one year were followed up. Data on pain scores post-insertion were collected. The project was approved by the trust’s Clinical Governance department. They did not require ethics approval.

Wilcoxon signed-rank test was used to determine statistical significance for comparison of pre-insertion and immediate post-insertion pain scores, and pre-insertion pain scores to 24-hour pain scores.

Results:
1. Median immediate post-insertion pain score: 0 (IQR 3.5), range 0-7 (significantly different to pre-insertion [p=0.002]).
2. 9 patients (60%) had a pain score of zero immediately post-insertion, 12 patients (80%) had a pain score of ≤5.
3. Median 24-hour pain score: 3 (IQR 7.25), range 0-10. (significantly different to pre-insertion [p=0.008]).
4. 5 patients (33%) had a pain score of zero at 24h, 10 patients (67%) had a pain score of ≤5.

Conclusions: Statistically significant reductions in pain scores were seen after PC both immediately and at 24 hours. Although this sample is too small to demonstrate, it is reasonable to expect that this would correspond with better clinical outcomes, as previously reported.
ESRA8-0052

E-POSTER VIEWING

CENTRAL NERVE BLOCKS

CHANGING THE PHYSICAL PROPERTIES OF THE LOCAL ANAESTHETIC MAY IMPROVE THE EPIDURAL BLOCK QUALITY

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Background and Aims: Hyperbaric bupivacaine has more density and viscosity than the plain bupivacaine which may slow its diffusion across the epidural space. The present study tested whether the use of hyperbaric bupivacaine would prolong the duration of epidural analgesia and reduce the volume of the infused anaesthetic.

Methods: 100 ASA 1-3 patients were randomly allocated to two equal parallel groups; either heavy bupivacaine or plain bupivacaine. Patients received a bolus of 16 ml of either of the local anaesthetic solution followed by a continuous infusion of 4 ml.hour-1 of plain bupivacaine 0.5% with fentanyl 100 mcg until the end of the surgery. A 2ml.hour-1 continuous infusion started on PACU admission and continued for 48 hours; the infusion rate was increased if the patient complained of pain. Patients were evaluated for the sensory block by pin-prick, motor block by modified Bromage scale. The first request for analgesia, pain scores and the total volume of the infused local anaesthetic were compared.

This study was registered in the Pan African Clinical Trial registry, identifier PACTR20150201010803.

Results: Hyperbaric Marcaine prolonged the duration of analgesia (13±3 versus 8±3 hours, P=0.0001). It reduced the pain intensity at 3, 6, 12, 24 and 48 hours postoperatively (P=0.04, <0.0001, <0.0001, <0.0001 and 0.045 respectively) and substantially reduced the volume of the infused epidural local anaesthetic (65±17 versus167±62 ml, P<0.0001).

Conclusions: Epidural hyperbaric Marcaine prolongs the duration of analgesia, reduces the total volume of LA thus may reduce chances for Local anaesthetic toxicity.

ESRA8-0426

E-POSTER VIEWING

CENTRAL NERVE BLOCKS

BILATERAL ERECTOR SPINAe PLANe BLOCK FOR SURGERY ON THE POSTERIOR ASPECT OF THE NECK: A CASE REPORT

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Background and Aims: The erector spinae plane block (ESPB) is a novel interfascial plane block whereby local anaesthetic is injected deep to the erector spinae muscle and superficial to the transverse process. It spreads craniocaudally leading to a multi-dermatomal sensory block. Local anaesthetic reaches the paravertebral space where it blocks spinal nerves, providing anaesthesia to the territory supplied by both the ventral and dorsal rami. It also blocks the rami communicantes, thereby providing visceral as well as somatic analgesia. To date, the ESPB has been used to provide analgesia in thoracic, abdominal and lumbar regions. We present the first case of the ESPB being used to provide surgical anaesthesia in the cervical region.

Methods: The patient was a 50 year old male with a large infected sebaceous cyst overlying the C2-4 spinous processes (figure 1). He had multiple risk factors for a general anaesthetic. Bilateral ultrasound-guided ESPB was performed at the level of T2 with a curvilinear probe.

Results: Formal testing after 15 minutes revealed loss of cold sensation over the C4 to T4 dermatomes. Midazolam 0.5 mg and intermittent boluses of ketamine (totalling 120 mg) provided mild sedation in a patient who remained in verbal communication and fully cooperative throughout the procedure. The procedure was well tolerated by the patient.

Conclusions: The ESPB is becoming an increasingly popular regional anaesthetic technique as it is easy, theoretically safe and quick to perform. This case demonstrates that the true scope of its clinical applications are still being discovered.

ESRA8-0269

E-POSTER VIEWING

CENTRAL NERVE BLOCKS

TRAMADOL AS ADJUNCT TO EPIDURAL CAUDAL ANAESTHESIA IN PEDIATRIC PATIENTS

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Background and Aims: Tramadol as adjunct to local anaesthetics may be used for causal epidural analgesia and is effective with minimal side effects or complications. This study was performed to evaluate its analgesic, efficacy and safety in pediatric patients undergoing inguinal hernia repair.

Methods: After IRB ethical approval 66 children aged between one and 5 years undergoing inguinal hernia repair were randomized to receive either a causal epidural injection of Levobupivacaine (1ml/kg of 0.25%) alone (group L), or with 2 mg/kg of Tramadol (group T) plus sevoflurane sedation in air and O2. During the postoperative time to first analgesia, number of doses of paracetamol administered within the first 24 hours, sedation scores within the first hour, and time to home readiness were recorded.

Results: The mean time to first rescue dose for analgesic was significantly longer (123±0.0003) in group T (459.52 min ± 48.43 min) compared to group L (224.65 min ± 41.00 min). The number of rescue doses of post-operative analgesic administered was significantly lower in the study group (p= 0.0002). Sedation scores were similar in the first hour post operatively. No hemodynamic changes or respiratory complications were observed.

Conclusions: This study demonstrated that causal levobupivacaine and tramadol injection provided longer duration of analgesia in children undergoing inguinal hernia repair procedures compared to levobupivacaine alone with satisfactory recovery profile.

ESRA8-0159

E-POSTER VIEWING

CENTRAL NERVE BLOCKS

ENHANCED RECOVERY PROTOCOL USING SHORT-ACTING LOCAL ANAESTHETICS – EXPERIENCE IN LATVIAN HOSPITAL

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Background and Aims: Enhanced recovery protocols (ERP) accelerate patient recovery and reduce the risk of complications. A significant risk for early mobilization is long-acting spinal anaesthesia (SA). The aim of this study is to investigate the effects of early mobilization on postoperative pain, adverse events and length of stay (LOS) after primary total hip arthroplasty (THA) using short-acting local anaesthetics (LA) in SA.

Methods: An RCT was conducted at the Hospital of Traumatology and Orthopaedics from September 2017 until March 2018. Local Ethics Committee has granted approval to this study, which included 46 patients. Patients were divided into control (S. Bupivacaine 18 mg - B) and study groups (S. Prilocaine 70 mg - P). Both groups received multimodal analgesia. Patients started mobilisation on the day of

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A randomized controlled study was conducted in 34 patients, who received TAA under spinal anesthesia. The patients were allocated to Group 1 (use of 100mcg of IT MS, n=12), Group 2 (use of 200mcg of MS, n=12) or Group 3 (use of 300mcg of IT MS, n=10). The primary outcome was the duration of motor block. Duration of motor block, consumption of opioid via intravenous PCA and adverse side effect related to IT MS were also recorded.

### Methods

**Background and Aims:** Intrathecal (IT) morphine sulfate (MS), as an additive to local anesthetics in spinal anesthesia, is widely used in clinical situations for postoperative analgesic purposes. It has been reported to prolong the duration of sensory nerve block within 24 hours after total hip replacement surgery. The aim of this study was to evaluate the analgesic effect and optimal dose of IT MS in patients receiving total ankle arthroplasty (TAA) under spinal anesthesia.

**Methods:** A randomized controlled study was conducted in 34 patients, who received TAA under spinal anesthesia. The patients were allocated in to Group 1 (use of 100mcg of IT MS, n=12), Group 2 (use of 200mcg of MS, n=12) or Group 3 (use of 300mcg of MS, n=10). The primary outcome was the duration of sensory nerve block. Duration of motor block, consumption of opioid via intravenous PCA and adverse side effect related to IT MS were also recorded.

**Results:** Duration of sensory block showed significant difference among the groups (P=0.048). There were no differences in adverse side effects (nausea/vomiting, P=0.835; pruritus, P=0.473; urinary retention, P=0.99). Consumption of fentanyl via IV PCA was not statistically different among the groups.

**Conclusions:** Our study demonstrated that IT MS significantly prolonged the duration of sensory block in patients receiving TAA under spinal anesthesia. In addition of 300mcg of IT MS was more optimal compared to 100mcg or 200mcg when used as an adjuvant for postoperative analgesia.

![Duration of sensory nerve block after TAA under spinal anesthesia](image)

**Table 1.** Cumulative amount of IV PCA following surgery

<table>
<thead>
<tr>
<th>IV PCA (fentanyl, mcg)</th>
<th>8h</th>
<th>24h</th>
</tr>
</thead>
<tbody>
<tr>
<td>group 1</td>
<td>66.67±54.43</td>
<td>369.33±280.97</td>
</tr>
<tr>
<td>group 2</td>
<td>22.33±24.24</td>
<td>201.46±77.97</td>
</tr>
<tr>
<td>group 3</td>
<td>153.68±52.91</td>
<td>464.8±326.88</td>
</tr>
</tbody>
</table>

*p value = 0.051; SD = 0.357*

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anesthetic solution via an intrathecal catheter using 0.25 ml of 0.5% isobaric bupivacaine increments and 0.25 ml of fentanyl (12.5 µg). The study regarded hemodynamic stability, incidence of hypotension, highest level of sensory and motor blockade, total ephedrine consumption and the satisfaction of patients and surgeon’s.

Results: Female predominance, the mean age was 75 years of which 72% were ASA ≥ III. Pertrochanteric fractures 47% followed femoral neck 53%. The sensory level ≥ D10 in almost all patients. The failures were 2%, Complement sedimentation in 20% of patients with conversion to general anesthesia in one patient. The complications are represented by arterial hypotension 3% the use of vasocostrctors 2%, bradycardia 0.8%. All patients and operators were satisfied

Conclusions: Our results show CTSA is effective, allows the administration of low doses of (AL), provides good hemodynamic stability in high-risk elderly patients with few side effects. Benefits include simple realization and low cost.

ESRA-0266
E-POSTER VIEWING

CENTRAL NERVE BLOCKS
ASEPTIC SUBCUTANEOUS TISSUE INFLAMMATION PRESENTING TO LATE ONSET SEVERE BACK PAIN AFTER EPIDURAL ANALGESIA

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Background and Aims: Infective complication after neuraxial anaesthesia is well known. This mostly results from introduction of infection during placement of neuraxial block, entry of microorganism from the needle entry site, or seeding of microorganisms from the blood occurring with traumatic block. Noninfective complication of neuraxis is also reported after such intervention. Non-infective inflammation outside neuraxis presenting as delayed onset back pain is very rarely reported. We present such a case here.

Methods: A fit and healthy female was admitted in active labour. Epidural was inserted uneventfully in first attempt under full asepsis. Eventually she went for CS which was performed successfully using epidural top up. At the end of the surgery the catheter was removed and sterile dressing applied. Her postpartum period was uneventful and she was discharged home. She was readmitted on D3 with severe back pain which was most severe at the site of needle entry and was radiating upwards to mid thoracic region. There was no headache, fever or signs meningism. CRP and WBC were in normal range. Her neurological examination was normal.

Results: She was started on conservative management. An MRI was done which revealed inflammatory change and/or fluid accumulation in the deep subcutaneous tissues spanning from L1-5 vertebrae. Her pain reduced over another 3 days after which she was discharged home.

ESRA-0376
E-POSTER VIEWING

CENTRAL NERVE BLOCKS
SPINAL ANAESTHESIA VS GENERAL ANAESTHESIA FOR LUMBAR MICRODISC SURGERY

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Background and Aims: Aim of this study was to compare the relative morbidities associated with SA vs GA for LMS regarding to intraoperative and early postoperative side-effects.

Methods: Forty-three ASA-II patients were randomized in two groups. The exclusion criteria for SA, that is, patient refusal, local infection, bleeding diathesis. Group of the patients receiving SA -19 were given a single injection of bupivacaine 0.25% plus 50ug of fentanyl. The injection performed one level higher or at the same level of the surgery in both positions regarding the patients wish. Patients receiving GA n=24 were induced with propofol, fentanyl, midazolam, and atracurium. For maintaining the anesthesia, combination of N2O/O2 with a propofol followed by a maintenance infusion. The recorded data during surgery were heart rate, systolic, diastolic, MABP, oxygen saturation, and blood loss. Postoperatively, occurrence of nausea, vomiting and pain intensity was evaluated by using VAS.

Results: The mean intraoperative blood pressure and HR was significantly higher in the GA group as compared with the SA group. In the SA group at the beginning of surgery, there were hypotension and bradycardia in 23% of patients, which needed atropine or ephedrine injection. The mean intraoperative blood loss was significantly lower in the SA group in comparison with that of GA group (P = 0.002). The mean pain scores in SA group was significantly lower in comparison with that of GA group (P < 0.01). Patients with SA had significantly less nausea and vomiting.

Conclusions: SA has some advantages over GA regarding intraoperative hemodynamic stability, prolonged postoperative analgesia, and significantly fewer postoperative side-effects.

ESRA-0330
E-POSTER VIEWING

CENTRAL NERVE BLOCKS
FLUOROSCOPIC EPIDURAL ANAESTHESIA IN PATIENT WITH KYPHOSCOLIOSIS- A CASE REPORT

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Background and Aims: C-arm or fluoroscopy guided epidural injections are frequently employed in management of chronic pain conditions. We used the technique for anaesthesia and intraoperative management of a patient.

Methods: A 25-year-old male patient posted for urethroplasty had polio with kyphoscoliosis that posed greater risk for general anaesthesia than regional anaesthesia. Placement of epidural catheter was difficult considering the degree of spinal torsion. Fluoroscopy guided epidural catheter insertion and spinal anaesthesia was performed.

Results: Successful regional anaesthesia was accomplished.

Conclusions: Knowledge of fluoroscopy technique adds to the anaesthesiologist’s armamentarium in difficult situations.
ESRA8-0496
E-POSTER VIEWING
CENTRAL NERVE BLOCKS

THE EFFECT OF REGIONAL VERSUS GENERAL ANAESTHESIA ON POST-OPERATIVE DELIRIUM IN ELDERLY PATIENTS UNDERGOING SURGERY FOR HIP FRACTURE: A SYSTEMATIC REVIEW
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2Birmingham Clinical Trials Unit, University of Birmingham, Birmingham, United Kingdom;
3Institute of Applied Health Research, University of Birmingham, Birmingham, United Kingdom;
4Warwick Medical School, University of Warwick, Warwick, United Kingdom.

Background and Aims: Hip fracture surgery is associated with significant mortality and morbidity including post-operative delirium. It is unclear whether regional or general anaesthesia may reduce the incidence of postoperative delirium. The aim of this systematic review is to investigate the impact of anaesthetic technique on post-operative delirium, mortality, length of stay, complications and functional outcomes.

Methods: Bibliographic databases were searched from inception to October 2016. Studies were eligible if general and regional anaesthesia were compared in patients, aged over 60 years, undergoing hip fracture surgery. Studies were included if reporting on the primary outcome of postoperative delirium or secondary outcomes of mortality, length of hospital stay, adverse events and functional outcomes. Study selection, data extraction and quality assessment was undertaken independently by two reviewers.

Results: Eighty-nine studies were included. There was no evidence to suggest that anaesthesia type influences post-operative delirium or mortality. Some studies suggested a small reduction in length of hospital stay with regional anaesthesia. There was some evidence to suggest that respiratory complications and intraoperative hypotension were more common with general anaesthesia. Heterogeneity precluded meta-analysis.

Conclusions: Whilst there was no evidence to suggest that anaesthesia types influences postoperative delirium, the evidence base is lacking. There is a need to ascertain the impact of type of anaesthesia on outcomes with an adequately powered, methodological rigorous study.

ESRA8-0495
E-POSTER VIEWING
CENTRAL NERVE BLOCKS

EVALUATION OF THE OPTIMAL LENGTH OF INSERTION OF EPIDURAL CATHETER WITH COMPUTED TOMOGRAPHY AND POSTOPERATIVE ANALGESIA
Radev V., Tsankov L., Bogdanov S., Stefanovski P., Malkodanski I., Radev R., Yolova S., Gencheva R., Dermentli A.
Medical University-Pleven, Pleven, Pleven, Bulgaria.

Background and Aims: The epidural catheter technique for analgesia is still the most used method for pain treatment after surgical intervention. One of the most common complications is the malposition of the catheter.

Aim: To study the effect of the length of insertion of the epidural catheter to the malposition and postoperative pain.

Methods: A prospective study of a heterogeneous cohort of 93 surgical and obstetrics patients treated in University Hospital - Pleven in 2017. Two groups with different lengths of insertion of the epidural catheter were compared (Group A: N=54 patients, L=3-5 cm, and Group B, N=39 patients, L=5-7 cm). Visual analogue scale (VAS) was used to evaluate the pain. For ten volunteers with unsuccessful pain relief, a Computed Tomography (CT) exam was made to visualize the position of the catheter. Student t-test and Chi-Squared test were used to compare the groups.

Results: Postoperative and delivery pain demonstrated a significant difference between two groups (VAS Group A - 2.59±0.26 vs. Group B- 4.3±0.35 P <0.05). The rate of unsuccessful (partial or total) epidural catheter analgesia is also different – 11.1% vs. 20.5% – but nonsignificant (chi squared=1.563. p=0.21 NS). The CT exam demonstrated a different variation of malposition of the epidural catheter. One of the most frequent findings was lateralization of the catheter. A patient from group B was found with a catheter out of epidural space.

Conclusions: There were fewer complications in the group of the 3-5 cm length of epidural catheter compared with the group of 5-7 cm.

ESRA8-0131
E-POSTER VIEWING
CENTRAL NERVE BLOCKS

HYPOBARIC VERSUS HYPERBARIC SPINAL BUPIVACAINE FOR TOTAL HIP ARTHROPLASTY: MAYBE FORGOTTEN BUT STILL WORKS
Sahin A.S.
Kanuni Sultan Suleyman Education and Training Hospital, Department of Anesthesiology and Reanimation, Istanbul, Turkey.

Background and Aims: Because of patients need not lay on the fractured hip for performing block hypobaric spinal anesthesia is especially useful for hip
fractures. This type of spinal anesthesia is a special regional anesthesia technique in lower limb orthopedic surgery procedures or total hip arthroplasty, where it is useful and feasible to produce an anesthetic block only on the operated side. The aim of this study, the hemodynamic consequences and mortality associated with the use of hyperbaric and hypobaric bupivacaine during spinal anesthesia for hip fractures.

Methods: Undergoing total hip arthroplasty procedures between June 2017-December 2017, 104 records from patients that had received were included in this study. 52 of them were anesthetized with hypobaric spinal anesthesia (10mg isobaric bupivacaine + 57.5mg fentanyl + 1.2cc distilled water), 52 were anesthetized with hypobaric spinal anesthesia (10mg hyperbaric bupivacaine).

Results: Results are shown in Table 1.

<table>
<thead>
<tr>
<th>Hypobaric</th>
<th>Hyperbaric</th>
<th>Hypobaric-p</th>
<th>Hyperbaric-p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart-rates</td>
<td>0.5-28-15</td>
<td>2.0-42-25</td>
<td>0.059</td>
</tr>
<tr>
<td>Blood-presures</td>
<td>4.0-20-63</td>
<td>4.0-17-64</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

**TABLE 1.**

When compared the blood pressures before and after the spinal block there were statistically significant differences between the groups. There were no significantly differences between groups in two months of mortality rates. One patients had mortality in hypobaric group and two patients in hyperbaric group. In hypobaric group surgical satisfaction rates were higher because of the patient's position. Because in this group block was performed same with surgery position.

Conclusions: Hypobaric spinal is indeed a good choice for total hip fracture surgeries. It produces reliable sensory as well as motor blockade with excellent hemodynamic stability and postoperative analgesia. It is more comfortable to patient and surgeon compared to hyperbaric spinal.

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**ESRA Abstracts**

**E-POSTER VIEWING**

**CENTRAL NERVE BLOCKS**

**INTRATHecal DEXAMETHASONe For PrevEntion Of COGNITIVE DISFUNCTION Of SURGICALLY Treated HIP FractURES**

Sakic L.1, Sakic K.2

1University Hospital Svett Duh, Anesthesiology, Zagreb, Croatia. 2Faculty of Dental Medicine and Health Osijek, Anesthesiology, Osijek, Croatia.

**Background and Aims:** Cognitive dysfunction is a common complication after surgically treated hip fracture in spinal anesthesia. We hypothesized that intrathecal applied dexamethasone could effectively attenuate post-surgical pain and cognitive dysfunction following surgically treated hip fracture.

**Methods:** Sixty male and female patients, ASA II-III, 50-95 years old were included in this prospective and randomized double-blind study. Patients were divided into two equal groups; group DLSA received 8 mg dexamethasone, group LSA did not receive dexamethasone, each in addition to intrathecal iso-baric levobupivacaine 0.5%. Cognitive dysfunction incidence, intensity and recurrence and adverse events were recorded for 10 days after the start of spinal anesthesia.

**Results:** Regression model was statistically significant and it explains 27% variance of dependent variable and it classifies correctly 79% of patients. The exception is the PPIBK group that did not receive dexamethasone. LSA group, which in comparison to DLSA group, increases probability of cognitive dysfunction occurrence for 7.67 times (95% CI: 1.39-42.36; P=0.019). Sixty male and female patients, ASA II-III, 50-95 years old were included in this prospective and randomized double-blind study. Patients were divided into two equal groups; group DLSA received 8 mg dexamethasone, group LSA did not receive dexamethasone, each in addition to intrathecal iso-baric levobupivacaine 0.5%. Cognitive dysfunction incidence, intensity and recurrence and adverse events were recorded for 10 days after the start of spinal anesthesia.

**Conclusions:** Intrathecal applied dexamethasone was effective in attenuation of cognitive dysfunction compared to placebo in patients scheduled for surgically treated hip fracture under spinal anesthesia with less adverse events.

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**ESRA-0105**

**E-POSTER VIEWING**

**CENTRAL NERVE BLOCKS**

**COMBINED THORACIC AND LUMBAR EPIDURAL TECHNIQUE FOR MANAGEMENT OF COMPLEX ABDOMINAL WALL HERNIA WITH LOSS OF DOMAIN ASA IV PATIENT: CASE REPORT AND LITERATURE REVIEW**

Sherif A.1, Marzouk A.2, Tollefs T.3, Pai A.4

1Professor and Chief Anesthesiologist, NMC Royal Hospital, Department of Anesthesia and Pain Medicine, Abu Dhabi, United Arab Emirates, 2NMC Specialty, Department of Surgery, Abu Dhabi, United Arab Emirates, 3Imelda Hospital, Department of Surgery, Bonheiden, Belgium, 4NMC Specialty, Abu Dhabi, Department of Surgery, Abu Dhabi, United Arab Emirates.

**Background and Aims:** Epidural anesthesia has been established as an advantageous technique in different types of abdominal surgeries providing most effective analgesia. TEA demonstrates effects on the postoperative neuromuscular stress response, and cardiopulmonary pathophysiology; resulted in decreased adverse perioperative cardiac events, better postoperative pulmonary function, and likely permits major surgical procedures to be performed on patients with moderate to severe comorbidities, who several years ago may have been considered to be too great a risk for surgery.

**Methods:** Male patient presented with large complex abdominal ventral hernia post CABG, hypertensive, diabetic, progressive coronary artery disease, pulmonary hypertension, and COPD, in addition to active cardiac functions impairment and use of intensive antplatelet therapy. Preoperative anterior abdominal wall muscles botox injection under US guidance. Epidurals were conducted in the sitting position using T5-6 and L 4- 5 interspaces. 10 ml of ropivacaine 0.25%, and 15 ml of bupivacaine 0.5% was administered through the thoracic and lumbar epidural catheters respectively. An infusion of bupivacaine (0.5%) was started through the lumbar epidural catheter at the rate 5 ml/hr.

**Results:** Procedure was successfully performed using combined thoracic and lumbar epidural block with two different local anesthetics. The intraoperative as well as the postoperative period remained uneventful. Patient was discharged with no reported postoperative morbidities.

**Conclusions:** Clinical data on using combination of central neuraxial blocks considered to be limited. In patients with severe cardiopulmonary compromise and multiple comorbidities, performing complex hernia repair can be carried out under combined thoracic and lumbar epidural may be a safe and effective alternative to general anesthesia.

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**ESRA-0152**

**E-POSTER VIEWING**

**CENTRAL NERVE BLOCKS**

**EPIDURAL ANESTHESIA FOR MANAGEMENT OF PSEUDOANEURYSM OF FEMORAL ARTERy IN ASA IV PATIENT ON DUAL ANTIPLATELET THERAPY: CASE REPORT PARADIGM SHIFT IN ANAESTHESIA PRACTICE**

Sherif A.1, Araj A.L.2

1Professor and Chief Anesthesiologist, NMC Royal Hospital, Department of Anesthesia and Pain Medicine, Abu Dhabi, United Arab Emirates, 2NMC Royal Hospital, Department of Vascular Surgery, Abu Dhabi, United Arab Emirates.

**Background and Aims:** Anticoagulation achieved with dual antiplatelet therapy is becoming increasingly common after coronary angioplasty and represents an everyday challenge to the anesthesiologists when neuraxial anesthesia is to be considered especially in high risk patients with multiple comorbidities. Epidural hematoma is a rare but potentially devastating complication of neuraxial anesthesia. To date, no clear data addressing the safety of epidural anesthesia in patients on dual antiplatelet therapy.

**Methods:** An 80-year-old man with a history of left groin swelling. Patient was on aspirin and bilatnra after angioplasty 3 month earlier, ischemic nephropathy, COPD, severe chest infection, heart failure, and pacemaker in place. Epidural anesthesia was planned because of the poor general condition of the patient. Epidural was conducted in the sitting position using L 3- 4 interspaces, 10 ml of bupivacaine 0.5% was injected in the epidural catheter. The surgical procedure
lasterd for 6 hours and the patient was shifted to ICU for monitoring. The intra-
operative as well as the postoperative period remained uneventful.

Results: Epidural anesthesia was conducted safely for emergency vascular sur-
gery in a high risk patient with multiple comorbidities.

Conclusions: Decision to perform regional anesthesia in the patients receiving
antithrombotic drugs should be made on an individual basis weighing risk of
epidual hematoma with the benefits of regional anesthesia. This report is not
meant to recommend the liberal placement of epidural catheters in patients ac-
tively taking dual antiplatelet therapy. Prospective studies with a large number
of patients are needed in order to give more accurate recommendation regarding
performing epidural block in such population.

ESRA-0504
E-POSTER VIEWING

CENTRAL NERVE BLOCKS

MANAGEMENT OF PATIENTS ON ORAL ANTICOAGULANTS
FOR URGENT FRACTURE NECK OF FEMUR SURGERY:
A QUALITY IMPROVEMENT PROJECT

Shetty D.1, Shashidhara M.K.2 1MMed Regional Anaesthesia, Stepping Hill Hospital, WWL NHS Trust & Edge Hill University, Anaesthesiology, Stockport, United Kingdom, 2SA- Stepping Hill Hospital and Honorary Senior Lecturer, Edge Hill University, Anaesthesiology, Stockport, United Kingdom.

Background and Aims: Fracture neck of femur (%NOF) is common in elderly popula-
tion. They generally present with multiple medical problems and at least
10% of the population are on oral anticoagulants at the time of presentation.
This poses huge challenge to anaesthetise and to operate on them safely. Na-
tional fracture femur audit recommends these patients are operated on prefer-
ably under 36hrs. This allows multiple benefits for the patients like:-
- Early mobilization - Less chance of DVT
- Reduced chest infection
- Reduced mobility & tissue viability problems
- Early pain relief
- Less delirium & cognitive problems
- Promote better end of life care

Surgery was delayed for several reasons in 21% of patients and anticoagula-
tion was second common reason.

Methods: Patient details along with the admission time to theatre times for ev-
ery %NOF patient is logged into the database by trauma co-ordinator. We looked
at all patients admitted from March 2017 to March 2018 and later stratified
those patients who waited for more than 36hrs. This group was subsequently
analysed to identify the reason for delay and 5-6% of patients were found to
be affected because of anticoagulation.

Results: We liaised with perioperative anticoagulation lead & the haematologist
and developed a local guideline to manage patients for DSH & hemiarthroplasty
surgery under 36hrs. This is now piloted and will become formal guideline for
%NOF patients.

Conclusions: Availability of Factor Xa and measurement of Thrombin time
will play an important role in management of patients on newer anticoagulants
posted for %NOF surgeries. Guidelines for Praxbind use in patients on
Dabigatran should be designed and re-audit after 6 months.

ESRA-0473
E-POSTER VIEWING

CENTRAL NERVE BLOCKS

SPINAL ANAESTHESIA WITH LOW DOSE
ARTICaine VERSUS GENERAL ANAESTHESIA IN
DAY-CARE ARTHROSCOPY

Rusch D.1, Brouwer R.2, van Kooten-Mosterd H.1, Os J.1, Bruining M.1, Niemeijer A.3, Keers J.3, Ten Hagen A.J.1 1Martini Hospital Groningen, Anes-
thesiology, Groningen, The Netherlands, 2Martini Hospital Groningen, Orthopaedic Department, Groningen, The Netherlands, 3Martini Hospital Groningen, Research Institute, Groningen, The Netherlands.

Background and Aims: Spinal anaesthesia (SA) and general anaesthesia
(GA) are two common techniques in knee arthroscopy. The aim of this study
was to evaluate whether 50 mg hyperbaric articaine 5% (SA-50) would provide
adequate anaesthesia compared to 70 mg hyperbaric articaine 5% (SA-70) and
GA in day-care knee arthroscopy.

Methods: In this retrospective study we compared three matched groups of 60
adult patients each who underwent day-care knee arthroscopy. They received
50 mg articaine, 70 mg articaine or general anaesthesia. We compared anaesthe-
tic outcomes of surgery under spinal and general anaesthesia, the effect on sur-
gery, anaesthesia related events during operation, administration of intravenous
medication perioperative, perioperative pain scores (VNRS), postoperative nau-
sea and vomiting (PONV), urinary retention, Aldrete scores, Length of Stay
(LOS) at the PACU and LOS in hospital.

Results: The groups were comparable regarding demographic characteristics
and data related to surgery. Patients who received general anaesthesia had signif-
ically higher pain scores (VNRS) and received significantly more pain medica-
tion at the PACU compared to both spinal anaesthesia groups. Discharge of the
patients in the general anaesthesia group was significantly earlier compared to
the patients in the spinal anaesthesia groups.

Conclusions: Low dose spinal anaesthesia with articaine 50 mg (SA-50), articaine
70 mg (SA-70) and general anaesthesia provided effective anaesthesia in day-care
knee arthroscopy. The group of patients receiving general anaesthesia had more
pain post operatively, but were discharged earlier. Further studies are needed to in-
vestigate other short-acting spinal anaesthetics compared to low dose articaine.

ESRA-0492
E-POSTER VIEWING

CENTRAL NERVE BLOCKS

THE EFFECTIVENESS OF NEURAXIAL BLOCKADE BY
USING A HEIGHT ADJUSTED DOSE OF 0.5% ISOBARIC
BUPIVACAINE FOR LOWER LIMB ORTHOPEDIC SURGERY

Tockov G.1, Rupnik T.2, Andonov N.3, Smajlican B.2 1Dr. Anaesthesiology and
intensive care-, Ljubljana, Slovenia, 2Surgical hospital Franc Derganc, Anaesthesiology and intensive care, Sempret pri Gorici, Slovenia, 3Kirurški
Sanatorij Rozna Dolina, Anaesthesiology and intensive care, Ljubljana, Slovenia.

Background and Aims: In this retrospective study we compared three matched
groups of 60 adult patients who underwent lower limb orthopedic surgery
in a high risk patient with multiple comorbidities.

Methods: Patient details along with the admission time to theatre times for ev-
ery %NOF patient is logged into the database by trauma co-ordinator. We looked
at all patients admitted from March 2017 to March 2018 and later stratified
those patients who waited for more than 36hrs. This group was subsequently
analysed to identify the reason for delay and 5-6% of patients were found to
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will play an important role in management of patients on newer anticoagulants
posted for %NOF surgeries. Guidelines for Praxbind use in patients on
Dabigatran should be designed and re-audit after 6 months.
In most cases, the height adjusted dose of isobaric bupivacaine provided an adequate level of anesthesia to safely perform the lower limb orthopedic surgery. Moreover, patients were hemodynamically stable, the incidence of hypotension and bradycardia were very low (<2%). In 1–2% of cases the protocol was changed to general anesthesia, because the level of anesthesia was insufficient or became inadequate during the procedure.

Conclusions: The intrathecally administered height adjusted dose of 0.5% isobaric bupivacaine is associated with adequate level of anesthesia to safely perform the lower limb orthopedic surgery. It provides hemodynamic stability, which is especially significant for elderly and polyimid patients. The incidence of adverse effects are relatively low and rarely require pharmacological intervention.

Table 1: Height adjusted doses of 0.5% isobaric bupivacaine for lower limb orthopedic surgeries

<table>
<thead>
<tr>
<th>Height (cm)</th>
<th>2.5% isobaric bupivacaine (ml)</th>
<th>0.5% isobaric bupivacaine (mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;150</td>
<td>2.5–4</td>
<td>10–12</td>
</tr>
<tr>
<td>150–175</td>
<td>2.0–3</td>
<td>11–13</td>
</tr>
<tr>
<td>176–190</td>
<td>2.0–3</td>
<td>13–15</td>
</tr>
<tr>
<td>&gt;190</td>
<td>1.5–2</td>
<td>&gt;16</td>
</tr>
</tbody>
</table>

Background and Aims: Rib fractures incur significant pain and morbidity. Ultrasound-guided thoracic paravertebral (PVB) analgesia has been described in the management of rib fractures, but little published evidence exists beyond case studies and small case series.

Methods: Patients are managed according to a blunt chest trauma protocol which involves anesthetic review and consideration of PVB. All PVBs are recorded on a database, which includes complications and reasons for removal. This was retrospectively analysed from the 4 years since inception of the database with corresponding national trauma audit (TARN) data from all patients with rib fractures admitted to our institution.

Results: A total of 314 consecutive PVB were received by 290 patients. The following complications were observed: 5 patients (1.5%) received ineffective analgesia, 39 catheters (12%) were unintentionally disconnected, 1 infusion was stopped due to metallic taste, 1 inconsequential pleural puncture. Multivariate regression of TARN outcome data demonstrates a statistically significant reduction in mortality associated with PVB, but this becomes non-significant as a time-dependent covariate.

Conclusions: PVB was a safe and effective treatment for rib fractures, but there is insufficient evidence to confirm a mortality benefit.

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Conclusions: PVB was a safe and effective treatment for rib fractures, but there is insufficient evidence to confirm a mortality benefit.
Background and Aims: Elderly patients with hip fracture experience high morbidity and mortality, and considered a real challenge for anesthesiologist. Concerns regarding this population include but not limited to, perioperative pain control, physiological frailty, medical comorbidities, side effects from systemic medications, and cognitive impairment commonly complicating pain assessment and treatment. Multiple strategies have been implemented to reduce complications and hospital stay including pre-emptive pain medications, nerve blocks, and fractures fixation. Fascia iliaca block is emerging as a block which can be safely and rapidly administered under ultrasound guidance resulted in reducing the occurrence rate of all the identified concerns.

Methods: 68 years old female, presented with Rt distal fracture femur DHS removal. History of thalassemia minor, Hb 8.1 mg/dl, no other comorbidities. Patient refused neuraxial anesthesia. After induction of general anesthesia ultrasound guided fascia iliaca block was conducted with high frequency linear probe 10-14 MHZ. Needle 100mm, ropivacaine 0.2% 50 ml injected, with good spread of local anesthetic. Catheter was inserted smoothly 4cm inside the fascial plane. The surgical procedure lasted for 4 hours uneventful.

Results: In the presented case U/S guided FICB decrease the consumption of anesthetics, and have opioid sparing effect in the whole perioperative period and reduce the incidence of complications such as delirium, urinary retention, and sedation.

Conclusions: It may be a safe, effective and economical method for multimodal analgesia. With future research, FICB and other nerve blocks will continue to become an appealing option in geriatric patients with femur fractures.

ESRAS-0312
E-POSTER VIEWING
PERIPHERAL NERVE BLOCKS

U/S GUIDED INTERSCALENE BLOCK FOR A PATIENT WITH HEMOGLOBIN MIWAT UNDER ROTATOR CUFF REPAIR, FEASIBILITY, EFFICACY AND PERIOPERATIVE SAFETY OF ANESTHESIA TECHNIQUE:
A CASE REPORT

Abd Elmotalib A.1, A.Sherif A.1, Merry del val B.2 1NMC Royal Hospital, Department of Anaesthesia, Abu Dhabi, United Arab Emirates, 2NMC Royal Hospital, Department of Orthopedics, Abu Dhabi, United Arab Emirates.

Background and Aims: Hemoglobinopathies poses many challenges to the anesthesiologist, which may presented as the primary cause of a surgical procedure, or with a problem arising from the disease itself. Hemoglobin MIVate is an unstable hemoglobin with an accelerated auto-oxidation into the ferric methemoglobin form. The absorption spectrum of hemoglobin M is abnormal, make pulse oximetry is an unreliable assessment tool in such patients.

Methods: We present a case 47 y male with Hemoglobin MIVate evaluated in anesthesia clinic for arthroscopic rotator cuff repair. In the anesthetic room, standard monitoring was applied. On room air, the SpO2 recorded a value of 54%: this value increased to 63% when oxygen was administered at 6 litre/ min via facemask. The decision was made to proceed with the procedure, cardiac & pulmonologist consultation was carried out, and anesthetic technique were fully explained to the patient. A radial arterial cannula was inserted pre-induction of sedation. Arterial blood gases were measured before induction. U/S guided interscalene block was carried out, the intraoperative as well as the postoperative period remained uneventful, and patient shifted to the PACU awake pain free.

Results: Hemoglobinopathies present challenging situations to the anesthesiologist. Knowledge of the limitations of conventional oximetry, increased vigilance, and alternative monitoring such as arterial blood gas analysis, co-oximeter may assist the delivery of a safe and uncomplicated anesthetic plan.

Conclusions: Ultrasound guided regional anesthesia technique has made challenging cases easier. Communication and collaboration between the surgeon and anesthesiologist are essential to ensure safe, optimum management and patient satisfaction in such cases.

ESRAS-0315
E-POSTER VIEWING
PERIPHERAL NERVE BLOCKS

ULTRASOUND-GUIDED AXILLARY BRACHIAL PLEXUS BLOCK: COMPARISON OF 2 VERSUS 3 PERIVASCULAR INJECTIONS

Ahid A., Khalifallah K., Abdelmoula M., Said M.R., Ajili S., Choura D., Ben Ali M. Mohamed Taher Maamouri Hospital, Department of Anaesthesiology and Intensive Care, Nabeul, Tunisia.

Background and Aims: Axillary brachial plexus block (ABPB) is an effective technique in upper limb surgeries. With the innovation carried out by the ultrasonography (US), it became easier, safer and more reliable. Several studies have shown that there was no difference between perinervous and perivascular (PV) techniques. So we focused on comparing two methods of perivascular ABPB which were double (DI) and triple injections (TI).

Methods: After approval from the Medical Ethical Committee, we conducted a prospective double-blinded randomized study. Consenting patients aged more than 20 years old, ASA I-II, scheduled for upper-extremity’s surgery were randomly allocated into 2 groups: DI group and TI group. In both groups, musculocutaneous nerve was first blocked with 7ml of the local anesthetic (LA): lidocaine 1.5% + epinephrine 5μg/ml. For the DI group, 28ml of LA were put at the 12-o’clock position relative to the axillary artery. For the TI group, 14 ml of LA were injected at each 6 and 12-o’clock positions. The primary outcome was the onset time of block. Secondary outcomes were: Success rate, imaging time, needling time, performance time, number of needle passes and complications. Statistical analysis was performed using IBM SPSS 20. P<0.05 were considered to be significant.

Results: 74 patients were included; 37 for each group. Both groups were comparable in terms of demographic data and complications. The main results are summarized in the table:

<table>
<thead>
<tr>
<th>TABLE 1.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DI groupe</td>
</tr>
<tr>
<td>(n=37)</td>
</tr>
<tr>
<td>TI groupe</td>
</tr>
<tr>
<td>(n=37)</td>
</tr>
<tr>
<td>p</td>
</tr>
<tr>
<td>Onset time of the block (min)</td>
</tr>
<tr>
<td>19.72 ± 7.9</td>
</tr>
<tr>
<td>15.4 ± 5.32</td>
</tr>
<tr>
<td>0.008</td>
</tr>
<tr>
<td>Success rate (%)</td>
</tr>
<tr>
<td>89.18</td>
</tr>
<tr>
<td>97.29</td>
</tr>
<tr>
<td>0.358</td>
</tr>
<tr>
<td>Performance time (min)</td>
</tr>
<tr>
<td>3.29 ± 0.8</td>
</tr>
<tr>
<td>3.8 ± 1.06</td>
</tr>
<tr>
<td>0.024</td>
</tr>
<tr>
<td>Total anesthesia time (min)</td>
</tr>
<tr>
<td>23.01 ± 8.07</td>
</tr>
<tr>
<td>19.21 ± 5.43</td>
</tr>
<tr>
<td>0.02</td>
</tr>
<tr>
<td>Number of passes</td>
</tr>
<tr>
<td>3.35 ± 0.58</td>
</tr>
<tr>
<td>3.24 ± 0.49</td>
</tr>
<tr>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Conclusions: Thanks to fewer needle passes and a shorter performance time, the PV DI technique provides a simple alternative for the US ABPB easy to learn and practice.
PERIPHERAL NERVE BLOCKS
COMPARISON BETWEEN INTRAVENOUS AND PERINEURAL DEXAMETHASONE ADDED TO LIDOCAINE FOR ULTRASOUND-GUIDED AXILLARY BLOCK

Khalfallah K., Abid A., Laatar C., Falfel M.A., Said M.R., Ajili S., Ben Ali M. Mohamed Taher Maamouri Hospital, Department of Anaesthesiology and Intensive Care, Nabeul, Tunisia.

Background and Aims: Multiple adjuncts to local anaesthetics (LA) have been used to prolong brachial plexus block and improve postoperative analgesia (PO-An). Perineural (PN) Dexamethasone (Dexa) has gained popularity in regional anaesthesia to prolong the duration of PO-An. But its advantage over intravenous (IV) administration is disputed. We performed this study to compare the analgesic efficacy of both routes of administration during US-guided axillary brachial plexus block (AXB) and their effects on the duration of motor (Mb) and sensory block (Sb).

Methods: After approval from the Medical Ethical Committee, we conducted a prospective double-blinded randomized study. Consenting patients aged more than 20 years old, ASA I-II status, scheduled for upper-extremity surgery were randomly allocated into 3 groups: Gr1: received 34ml of 1.5% lidocaine with adrenaline; Gr2: received 34ml of LA + 8mg (4ml) of Dexa via IV administration; Gr3: received 34ml LA + 8mg of Dexa via PN administration. Primary outcome was the duration of PO-An defined as the time interval between block performance and the exact time patients experienced pain at the surgical site. Secondary outcomes were duration of Mb and Sb. Statistical analysis were performed using IBM SPSS 20. P<0.05 were considered to be significant.

Results: 90 patients completed the study. There were no differences between the groups in terms of demographic and perioperative data. Block success rate was 100%. Main results are summarized in Table1.

Conclusions: In our study, compared to IV administration, PN Dexa prolong the duration of postoperative analgesia for US-guided axillary brachial plexus block (AXB) and their effects on the duration of motor (Mb) and sensory block (Sb).

Table 1: Summary of results

<table>
<thead>
<tr>
<th>Group</th>
<th>PO-An (min)</th>
<th>Mb (min)</th>
<th>Sb (min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gr1 (n=30)</td>
<td>183[127-203,5]</td>
<td>130[120-133]</td>
<td>149,5[140-162,5]</td>
</tr>
<tr>
<td>Gr2 (n=30)</td>
<td>240[228-270]</td>
<td>151,5[133-170]</td>
<td>182,5[170-198,5]</td>
</tr>
</tbody>
</table>

Variables are presented as median [Q1-Q3]

TABLE 1. Summary of results

Results: 90 patients completed the study. There were no differences between the groups in terms of demographic and perioperative data. Block success rate was 100%. Main results are summarized in Table 1.

Conclusions: In our study, compared to IV administration, PN Dexa prolong the duration of postoperative analgesia for US-guided AXB as well as the duration of sensorimotor block.

AN AUDIT OF PAIN SCORES AND PONV RATES IN THE PACU AND WARD FOLLOWING DIFFERENT TYPES OF BREAST SURGERY

Abrahams H. Nobles Hospital, Anaesthesia and Critical Care, Douglas, Isle of Man.

Background and Aims: Pectoral nerve (PECS) and serratus plane blocks (SPB) have become popular alternatives to established regional anaesthesia techniques for breast surgery since first described in 2011 and 2013 respectively. These blocks are easy to learn and administer to patients under ultrasound guidance and appear to reduce post-operative pain scores/opioid consumption as well opioid-related adverse effects (PONV).

I investigated the qualitative performance of these blocks with reference to pain scores and PONV episodes in the PACU/general ward.

Methods: Electronic case notes for 25 patients undergoing breast surgery between September 2017 and April 2018 were retrospectively reviewed. Local audit/IRB approval was obtained. All patients had consented to having either a pectoral and/or a serratus plane nerve block sited under ultrasound guidance following GA. Post-operative pain scores (NRS) and PONV episodes requiring treatment both in the PACU and general ward were recorded.

Results: 90 patients completed the study. There were no differences between the groups in terms of demographic and perioperative data. Block success rate was 100%. Main results are summarized in Table1.

Conclusions: In our study, compared to IV administration, PN Dexa prolong the duration of postoperative analgesia for US-guided axillary brachial plexus block (AXB) and their effects on the duration of motor (Mb) and sensory block (Sb).

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</table>

Variables are presented as median [Q1-Q3]

TABLE 1. Summary of results

Results: The majority of patients had a pain score of 0/10 both in the PACU (86%) and 24 hours later in the general ward (76%). The 2 cases with high PACU pain scores were both WLE with SNBx - this suggests block failure. This was not translated into a similar pain score on the ward 24 hours later. There was an increased number of PONV episodes in these same patients on the ward. 12% of patients had PONV requiring treatment in the PACU, 20% in the ward.

Conclusions: The results are generally encouraging with a high success rate as evidenced by low PACU/ward pain scores as well as low PONV events requiring treatment.

Future research should investigate possible impact on chronic pain following breast surgery.
PERIPHERAL NERVE BLOCKS

ANTERIOR SCIATIC NERVE BLOCK: ULTRASOUND EFICACY WITH OR WITHOUT NEUROSTIMULATION – RANDOMIZED CLINICAL TRIAL

Amaral S.1, Conceição D.2, Caramori N.1, Machery V.1, Rossi T.1, Garcia J.1
1 Hospital Governador Celso Ramos - Secretaria de Saúde de Santa Catarina, Anestesia, Florianópolis, Brazil, 2Nucleus for Teaching and Research in Regional Anesthesia - Hospital Governador Celso Ramos, Anestesia, Florianópolis, Brazil.

Background and Aims: Sciatic nerve block is well established technique used percutaneously in inferior limb surgery, classically performed by posterior or lateral approach. Anterior approach is performed with the patient in supine position, which would be more ergonomic, especially in trauma, but it is an advanced ultrasound block since it is performed at approximately 10cm depth. We hypothesized that the use of ultrasound with or without neurostimulator would not affect the efficacy of the block.

Methods: Forty patients were enrolled and received an anterior sciatic nerve block. Patients were randomized to a group where the block was performed using only ultrasound and other group with ultrasound and neurostimulator. Both received 25mL Ropivacaine 0.75%. Primary outcome was to evaluate the efficacy of sensorial and motor block after 30 minutes in both groups. Secondary outcomes were time for performing the block, complications and patient satisfaction.

Results: Motor block and sensitive block of tibial and peroneal nerves were similar in both groups. Time for performing the block was inferior in ultrasound alone group (298 vs 193 seconds, p < 0.016). There were no report of complications. Patient satisfaction was similar in both groups (p = 0.234).

Conclusions: The use of neurostimulation with ultrasound did not show any advantage against the use of ultrasound alone, and increased the time of block performance.

ESRA-0060
E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

RETROSPECTIVE AUDIT OF COMPLIANCE WITH HOSPITAL RIB FRACTURES PATHWAY

Ang K.S., Sage F. East Surrey Hospital, Department of Anaesthetics, Redhill, United Kingdom.

Background and Aims: Rib fractures are associated with significant morbidity and mortality. The pathophysiology involves hypoxia and hyperventilation secondary to pain, damaged underlying lung and altered breathing mechanics.

In 2015, our hospital introduced a multidisciplinary rib fractures algorithm that helps identify patients at greatest risk of respiratory deterioration and incorporates effective analgesia, early referral to anesthesiologists and critical care, chest physiotherapy and involvement of acute pain team to better manage these patients.

This audit aims to investigate our compliance with the pathway.

Methods: Patients diagnosed with fractured ribs from January 2016 to April 2017 were identified using hospital-coding system. Data was collected retrospectively and compared with previous audit data collected pre algorithm.

Results: Forty-six patients were identified. Median (range) age was 75.5 (25 – 96) years. Median (range) number of fractured ribs was 3 (1 – 9). Analgesia prescribed in A&E and in ward is depicted in Table 1. Thirty patients (65%) received regional anaesthesia for pain relief (29 serratus plane blocks, one intercostal block). Thirty-eight patients (83%) received chest physiotherapy.

Thirteen patients were admitted to critical care, out of which seven required antibiotics for pneumonia. No patients required mechanical ventilation, however two patients required high flow nasal oxygen therapy. Median (range) hospital length of stay was 7 (1 – 57) days.

Figure 1 [not shown] demonstrates that the pathway has resulted in significant increase in physiotherapy input, use of regional anaesthesia and acute pain team involvement.

Conclusions: The rib fracture pathway aims to reduce patient morbidity and mortality. This audit demonstrates substantially improved compliance with the pathway since its introduction.

ESRA-0174
E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

COMPARISON OF PERIPHERAL NERVE BLOCKADE CHARACTERISTICS BETWEEN NON-DIABETIC PATIENTS AND PATIENTS SUFFERING FROM DIABETIC NEUROPATHY: A PROSPECTIVE COHORT STUDY

Baeriswyl M.1, Taffe P.2, Kirkham K.R.3, Bathory I.1, Rancati V.1, Crevoisier X.1, Cherix S.1, Albrecht E.1
1 Centre Hospitalier Universitaire Lausanne, Anesthesiologie, Lausanne, Switzerland, 2 Centre Hospitalier Universitaire Lausanne, Evaluation des soins IMSE, Lausanne, Switzerland. 3 Women's College Hospital, Anesthesia, Toronto, Canada, 4 Centre Hospitalier Universitaire Lausanne, Orthopédie et traumatologie, Lausanne, Switzerland.

Background and Aims: Animal data have demonstrated increased block duration after local anaesthetic injections in diabetic rat models. Whether the same is true in humans is currently undefined. We therefore undertook this prospective cohort study to test the hypothesis that type II diabetic patients suffering from diabetic peripheral neuropathy (DPN) would have an increased block duration after ultrasound-guided popliteal sciatic nerve block (US-PSNB) when compared to patients without neuropathy.

Methods: Thirty-three type II diabetic patients with neuropathy and 23 non-diabetic control patients, scheduled for forefoot surgery, were prospectively included. All patients received an US-PSNB with a 30mL 1:1 mixture of lidocaine 1% and bupivacaine 0.5%. The primary outcome was time to first opioid request after block procedure. Secondary outcomes included the time to onset of sensory blockade, and pain score at rest on postoperative day 1 (numeric rating scale, 0–10). These outcomes were analysed using an accelerated failure time regression model.

Results: Patients in the DPN group had significantly prolonged time to first opioid request (DPN group: 1440min [95%CI: 1440-1440]; control group: 710min [95%CI: 496-840]; p=0.0004). The time ratio for patients with DPN was 1.57 (95%CI: 1.10-2.23; p=0.01). DPN patients also experienced a shorter time to onset of sensory blockade by 57%. Finally, patients with DPN had lower pain scores at rest on postoperative day 1 (DPN group: 0.0 [95%CI: 0.0-0.0]; control group: 3.0 [95%: 0.0-4.7]; p=0.001).

FIGURE 1.

Conclusions: After an US-PSNB, patients with DPN demonstrated reduced time to onset of sensory blockade, with increased time to first opioid request when compared to patients without neuropathy.
ESRA8-0195
E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

A REVIEW OF SINGLE SHOT INTERSCALENE NERVE BLOCKS COMPARED TO INTERSCALENE CATHETERS FOR SHOULDER REPLACEMENTS

Barrett J., Sharma N. Wrightington- Wigan and Leigh NHS Foundation Trust, Anaesthetic department, Wigan, United Kingdom.

Background and Aims: To compare the benefits of indwelling interscalene catheters over single interscalene injections for shoulder replacements at a tertiary referral orthopaedic hospital

Methods: We collected data from 13 patients having catheters, 26 patients having single-shot injections, and 2 patients who had no block. We assessed: • Patient BMI, • Type of LA used, dose, and concentration, • Postoperative pain score with block working in recovery, pain when block wore off, post op analgesia used, and • Complications including, hoarse voice, dysphagia, dyspnœa and nausea, • How long the block lasted and how long the catheter was kept in place.

Results: Patients having single injection interscalene blocks for shoulder replacements had low pain scores with the block working. However they suffered high pain scores when the block wore off after around 18 hours. Even with strong analgesia, post block wearing off, the pain was still very severe, and preemptive analgesia before the block wore off did not seem to help. The catheter group had good pain relief, with blocks lasting around 40 hours, post catheter removal the pain was much lower than the single injection group. There were few complications in either groups. The two patients who received no block at all had higher pain scores immediately post-operatively but lower pain scores on the ward the next day.

Conclusions: We need to improve our analgesia for patients having single injection blocks when the block wears off, possibly having opiate PCAs ready for the wards. Catheters seem to work well and cause less problems with post-operative analgesia when they are removed.

ESRA8-0194
E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

PHRENICUS NERVE PALSY IN HEART TRANSPLANTED PATIENT AS A COMPLICATION OF SUPRALAPICULAR NERVE BLOCK

Bazargani B. Akademiska University Hospital, Anestesi and Intensive care, Uppsala, Sweden.

Background and Aims: Regional anesthesia has an expanding role in upper extremity surgery. Brachial plexus blocks offer several advantages including providing effective analgesia, reducing narcotic requirements, and facilitating ambulatory care surgery. Despite the popularity of nerve blocks, the anesthesiologist must not forget the complications associated with regional anesthesia.

Methods: This article describes a case of symptomatic phrenic nerve palsy after supraclavicular brachial plexus block in a heart transplanted man. A 59-year-old man which had a transplanted heart from 20 years ago underwent a right-sided supraclavicular block in preparation for full skin transplantation from right arm to the right hand.

Results: The patient experienced acute-onset dyspnea, chest discomfort, and anxiety, and physical examination demonstrated reduced breath sounds in both hemithorax. Ultrasound examination documented bilateral elevation of diaphragm with no movement consistent with an intrageneric phrenic nerve palsy. The patient’s abdominal breathing had an acceptable effort but we admitted him to intensive care unit for further observation and eventual mechanical ventilation. No long-term sequelae have been identified; however, there was a delay in surgical care, admission to the hospital, and transient pulmonary symptoms. We attribute this complication to significant bilateral phrenic nerve palsy which is described as a life treating situation. There was an unknown left-sided phrenic nerve palsy in this case which happened during his previous heart transplantation surgery causing compromised pulmonary reserve and poor tolerance of transient bilateral diaphragmatic paresis after a right-sided supraclavicular nerve block.

Conclusions: We suspect that the history of heart transplantation could be a contraindication for supracavicular and interscalaner nerve blocks.

ESRA8-0383
E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

EVALUATION OF PHRENIC NERVE PARALYSIS AFTER AN INTERSCALENE BLOCK WITH AND WITHOUT LIPOSOMAL BUPIVACAINE

Berg A., Jacob H., Jason H. University of Minnesota, Anesthesiology, Minneapolis, MN, USA.

Background and Aims: Interscalene blocks (ISB) have longed been used during shoulder surgeries. Although these blocks provide excellent analgesia, there are not without their own risks. Urmey et al., showed 100% of ISBs also block the phrenic nerve, and while only 55% of unilateral paralysis are symptomatic, this can be problematic for patients with lung disease. There are many strategies to reduce the incidence of phrenic nerve paralysis, but never has the incidence or duration phrenic nerve paralysis after an ISB with liposomal bupivacaine (LB) been established or studied. Our aim is to determine if a difference exists between an ISB with or without LB with respect to a change in the incidence and duration in phrenic nerve paralysis.

Methods: This is a prospective, randomized double-blinded trial aiming to enroll roughly 50 patients undergoing an ISB block for shoulder surgery. They will be randomized into two groups; one receiving an ISB with bupivacaine and one with lipovacaine plus LB. All patients will have their diaphragmatic activity collected via ultrasound prior to the block, in recovery and post op day one. Diaphragmatic activity will be evaluated via ultrasound using both the sniff and sigh test.

Results: Although completed results are pending, preliminary data is promising that clinically relevant data will be demonstrated from this study. To date there has been no difference in phrenic nerve paralysis between the two groups at either the 3 hour or the 24 hour mark.

Conclusions: Preliminary data suggests that ISB with LB does not add risk of prolonged phrenic nerve paralysis.

ESRA8-0325
E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

DOES THE SAPHENOUS NERVE PLAY AN IMPORTANT ROLE AFTER MAJOR ANKLE SURGERY?

Bjorn S., Wong W.Y., Baas J., Nielsen K.K., Borganh J., Hauritz R.W., Bendtson T.F.1 Aarhus University Hospital, Department of Anaesthesiology and Intensive Care Medicine, Aarhus, Denmark, 2Tan Tock Seng Hospital, Department of Anaesthesiology, Singapore, Singapore, 3Aarhus University Hospital, Department of Orthopedic Surgery, Aarhus, Denmark, 4Zealand University Hospital-University of Copenhagen, Department of Anaesthesiology and Intensive Care Medicine, Aarhus, Denmark, 5Kolding Hospital, Department of Anaesthesiology and Intensive Care Medicine, Kolding, Denmark.

Background and Aims: The importance of a sciatic nerve block after major ankle surgery is well-investigated, whereas this study was the first randomized, controlled, double-blinded trial aimed to investigate the importance of a supplemental saphenous nerve block for patients undergoing major ankle surgery (RAPM 2018, doi: 10.1097/AAP.0000000000000764).

Methods: Eighteen patients were enrolled, and it was confirmed that all patients had an effective popliteal sciatic nerve block before surgery. Preoperatively, and under general anaesthesia, patients received a saphenous nerve block with 10 ml saline or 0.5% bupivacaine with 1:200,000 adrenaline. Primary outcome was the proportion of patients reporting numerical rating scale (NRS) score above 3. Postoperatively, a patient reporting NRS > 3 would receive a rescue saphenous block.

Results: The maximal pain scores (Fig. 1) were significantly lower in the active group (0 [0-0]) compared to the placebo group (5 [4-6]). In total 8 out of 9 patients in the placebo group reported NRS ≥ 3 within 30 minutes after PACU.
arrival versus 1 out of 9 patients in the active group (P=0.003). All patients with NRS > 3 receiving a saphenous rescue block dropped to a pain score of 0 within 30 minutes.

![FIGURE 1. Pain scores](Image)

Conclusions: The saphenous nerve plays an important role after major ankle surgery as the patients in the placebo group experienced moderate to severe pain from the medial side of the ankle. All patients with NRS > 3 receiving a rescue saphenous block became pain free, which underlines the importance of a saphenous nerve block as a supplement to a sciatic nerve block.

ESRAS-0282
E-POSTER VIEWING
PERIPHERAL NERVE BLOCKS
READY FOR PUMP TIME? PATIENTS UNDERGOING CORONARY ARTERY BYPASS GRAFT SURGERY UTILIZING ERRECTOR SPINAE (ESP) BLOCKS FOR ANALGESIA: A RETROSPECTIVE STUDY

Boublik J.1, Brodt J.1, Horn J.L.1, Boyd J.2, Tsui B.1 1Stanford University, Anesthesiology- Perioperative and Pain Medicine, Stanford, CA, USA, 2Stanford University, Department of Cardiothoracic Surgery, Stanford, CA, USA.

Background and Aims: The ESP block1 has emerged as an alternative to the epidural and used with good success in thoracic surgery2 and patients receiving antplatelet therapy3. Its superficial interfascial nature and potential safety due to distance from major vascular structures, lung and neuraxis led us to introduce it to our patients undergoing on-pump coronary artery bypass grafting (CABG)4. The aim of this retrospective study was to investigate its utility in our study population.

Methods: All patients undergoing CABG receiving bilateral ESP catheters placed at T5 were reviewed. Catheters were injected with 15-20ml of 0.5% ropivacaine preoperatively with an autobolus of 0.1% ropivacaine of 10 ml q1hour and a PCA option of 5 ml q30 min postoperatively. Intraoperative analgesia consisted of ketamine, fentanyl and dexmetomidine infusions, with a rebusol option for ropivacaine at the discretion of the OR team. Additional postoperative analgesia was at the discretion of the primary team.

Results: Three patients were reviewed. Intraoperatively, all received 100 mg of Ketamine in addition of 500 mcg of fentanyl multimodal analgesia, mean postoperative opioid consumption was 158.33 mcg IV fentanyl for POD 0-3 in addition to 10-15 mg of Roxicodone PO per day. Median first reported VAS score was 6.5, median scores on POD 5.5, POD 1, POD 2 and POD 3 0. One patient suffered mediastinal haemorrhage due to post-cardiopulmonary bypass coagulopathy requiring transfusion postoperatively, no coagulation and neurologic complications in any of the patients were noted despite perioperative anticoagulation.

Conclusions: The erector spinae block represents analgesic adjunct option and is probably safe for patients undergoing CABG.

ESRAS-0084
E-POSTER VIEWING
PERIPHERAL NERVE BLOCKS
PATIENT SATISFACTION AFTER HAND TRAUMA SURGERY PERFORMED UNDER REGIONAL ANAESTHESIA

Buckley D., Ahmed S., Khan S., Krishnamurthy H. Department of Anaesthesia, Royal Victoria Infirmary, Newcastle Upon Tyne, United Kingdom.

Background and Aims: This study follows on from a previous audit analysing data following hand surgery performed under regional anaesthesia.

Methods: Pain scores, satisfaction rates and complications were reviewed from patients who received a block for hand trauma surgery since 2012.

Results: Of the 1838 patients who had complete data, mean age was 42, 68% were male and 95% ASA 1-2.

The majority were day case procedures (92%) lasting < 2 hours (99%). Axillary blocks were most common (78%), followed by infraclavicular blocks (16%). Forearm top-up blocks occurred in 9%. The intra-operatively quality of the block was "perfect" in 94% of cases.

Most were performed without sedation (86%) and few patients felt pain or paraesthesia during the block (1% and 5%, respectively), with 77% describing the experience as "not unpleasant".

Whilst motor weakness was rated as “a little annoying” by 21% of patients, the majority (72%) did not find it an issue. No pain was experienced by 94% of patients on the postoperative ward, dropping to 74% and 57% in the evening and night of surgery, respectively (see graph).

Overall, 91% of patients reported satisfaction rates of good or excellent, with 92% saying they would have regional anaesthesia again.

ESRA Abstracts
Background and Aims: Patients with fractured neck of femur (NOF) at our institution are treated with a supra-inguinal fascia iliaca catheter (FIC) as soon as possible after diagnosis. If expertise is unavailable, a single shot fascia iliaca block (SSB) is performed. Previous studies have demonstrated reduced rates of delirium with SSB. This evaluation compares delirium incidence in these groups with patients who had no block (NB) preoperatively.

Methods: After institutional approval, retrospective data for continuous cases in the National Hip Fracture Database were cross-referenced with our local pain database. Delirium screening used the 4AT tool. Data were analysed using SPSS.

Results: From January 2017 to March 2018, 428 patients presented with a fractured NOF, of whom 408 had complete data regarding pre-operative blocks. Of these, 166 had a FIC inserted, 137 SSB and 106 NB. Rates of delirium were lowest in the FIC group compared to the SSB and NB groups (18; 21; 33% respectively, see graph). However, they were also younger (80.5; 82.6; 83.9 years) and had lower ASA scores (ASA 1 and 2 proportion 35%; 25%; 19%). Accounting for age, ASA and pre-operative cognitive function, logistic regression demonstrated that FIC was independently associated with reduced delirium (Odds ratio 0.39, 95% CI 0.16-0.93, p=0.034).

Conclusions: Treatment with a pre-operative fascia iliaca catheter is independently associated with reduced delirium in this retrospective sample. Catheters appear to be more protective than single shot blocks. Further prospective research is warranted to confirm these findings.

FIGURE 1. Delirium Scores (4AT) and Patient Groups

<table>
<thead>
<tr>
<th>Patient Group</th>
<th>No Block</th>
<th>Single Shot Fascia Iliaca Block</th>
<th>Supra-inguinal Fascia Iliaca Catheter</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Suspected Delirium (4AT score 0-2)</td>
<td>31%</td>
<td>21%</td>
<td>18%</td>
</tr>
<tr>
<td>% Suspected Cognitive Impairment (4AT score 1-3)</td>
<td>33%</td>
<td>29%</td>
<td>33%</td>
</tr>
<tr>
<td>% No Cognitive Impairment (4AT score 0)</td>
<td>35%</td>
<td>25%</td>
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TABLES 1, 2.

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<th>Duration &gt;48 hours</th>
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<td>Female Sex</td>
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<td>Male Sex</td>
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</tbody>
</table>

ESRA8-0156
E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

A COMMUNITY HOSPITAL REPORT ON THE INCIDENCE OF COMPLICATIONS AND CATHETER FAILURES OF CONTINUOUS PERIPHERAL NERVE BLOCK WITHIN 48 HOURS POSTOPERATIVELY

Burns M.¹, Buckley E.¹, Goodman B.², Dobson C.² Phelps County Regional Medical Center, Anesthesia, Rolla, MO, USA, ²Webster University, Nurse Anesthesia, St. Louis, MO, USA.

Background and Aims: Continuous peripheral nerve blocks are included in multiple ERAS protocols following major orthopedic surgery. Continuous peripheral nerve blocks provide non-opioid postoperative pain relief with varied success rates reported in the literature. The purpose of this study is to evaluate the incidence and complications within 48 hours postoperatively in a community hospital setting.

FIGURE 2. Overall Patient Satisfaction with Regional Anaesthesia for Hand Trauma Surgery
Methods: IRB approval was obtained prior to performing a retrospective chart review of 806 continuous peripheral nerve blocks performed at a community hospital.

Results: Upper extremity continuous nerve blocks remained in place for more than 48 hours at a greater rate than lower extremity nerve blocks. Continuous axillary nerve blocks remained in place at a rate of 85%, interscalene 88%, supravacular 87%. Continuous femoral and sciatic nerve blocks remained in for greater than 48 hours 78% of the time.

Conclusions: Continuous upper and lower extremity nerve blocks remain in place for greater than 48 hours an average of 84% of the time. This provides non opioid pain relief in conjunction with ERAS protocols with continued success for greater than 48 hours consistently. The most common cause of block removal (advertent or inadvertent) was accidental removal suggesting low rates of removal related to block complications.

FIGURE 1.
patients had no immediate postoperative pain, block success was 96.7% and satisfaction rate was 90%.

Conclusions: We conclude that the off-site video assessment for residency training in UGRA has moderate reliability when compared to traditional on-site assessment, and this assessment method is worth exploring.

ESRA8-0143
E-POSTER VIEWING
PERIPHERAL NERVE BLOCKS
PECS II BLOCK FOR PROXIMAL UPPER LIMB FISTULA SURGERY
Cheong G.¹, Teng S.J.², Ooi D.G.S.¹, Tan Y.S.S.¹, Wong M.H.¹ ¹Khoo Teck Puat Hospital, Anaesthesia, Singapore, Singapore, ²Khoo Teck Puat Hospital, General Surgery, Singapore, Singapore.

Background and Aims: Upper limb fistula surgeries are often performed under brachial plexus blocks (BPB). However, the proximal site surgical incision close to the axilla frequently extends beyond coverage by a BPB and requires either rescue local anaesthetic (LA) supplementation or general anaesthesia. The PECS block, originally done for breast surgery, incorporates a PECS II component which covers the axilla and upper arm. The PECS II block is done by depositing LA in between the pectoralis minor and the serratus anterior muscle.

Methods: We report a patient presenting for left brachio-basilic arterio-venous graft creation surgery done successfully under a left supraclavicular and PECS II block. He is a 75-year old gentleman with hypertension, hyperlipidemia and end-stage renal failure requiring haemodialysis. A left supraclavicular BPB (Figure 1) and PECS II block (Figure 2) were done under ultrasound guidance with Ropivacaine 0.4% 20mL and Ropivacaine 0.3% 20mL respectively with a BBraun Stimuplex 50mm 22G insulated needle.

Results: The surgery involved two incisions - above the elbow crease and just distal to the axilla (Figure 3). After the brachial artery and basilic vein were dissected, a vascular graft was tunnelled subcutaneously in the anterior arm. Surgical duration was 2 hours. The patient remained pain free intraoperatively with no supplemental LA. The surgery was completed uneventfully. He was discharged on the same day and the numbness resolved within 24 hours.

Conclusions: Addition of the PECS II block to a BPB for proximal upper limb fistula surgeries can be considered. Further studies can be considered to investigate its potential benefit.

ESRA8-0130
E-POSTER VIEWING
PERIPHERAL NERVE BLOCKS
‘SCALDED’ BLOCK: ULTRASOUND-GUIDED LATERAL SURAL CUTANEOUS NERVE BLOCKADE FOR SUPERFICIAL CUTANEOUS LATERAL LEG PAIN MANAGEMENT IN THE EMERGENCY DEPARTMENT
Ciesewski D., Alerhand S. Icahn School of Medicine at Mount Sinai, Department of Emergency Medicine, New York, NY, USA.

Background and Aims: Lower extremity peripheral nerve blockade (PNB) often involves both motor and sensory anesthesia resulting in leg weakness and ambulatory difficulty. Our aim was to describe an ultrasound-guided peripheral nerve block technique (’SCALDED’ Block - Superficial Cutaneous Anesthesia Lateral (leg) Distribution in the Emergency Department) for providing motor-sparing, pure sensory anesthesia following a superficial injury to the lateral leg in patients presenting to the emergency department.

Methods: Patient presenting with lateral leg pain following superficial injury (burns, cellulitis) examined to confirm pain purely sensory in nature. Patient placed in prone position for ultrasound-guided access to nerve branches. The lateral sural cutaneous nerve (LSCN) identified by tracing its root to the common peroneal nerve (CPN) sciatic nerve (SN) using US-guidance. Lidocaine (1%, with epinephrine) injected along the superficial LSCN route for anesthetic blockade. Temporal assessment of anesthetic effect, pain management, and monitoring of motor or ambulatory impairment to assess efficacy and feasibility of blockade.

Results: Regional anesthesia along the LSCN sensory distribution experienced at 7-9 minutes post-lidocaine administration. Peak analgesic effect experienced at 25-30 min. The duration of LSCN distribution anesthesia ranges 120-150 minutes. Negligible amount of delayed sensory anesthesia noted at 40-50 minutes. No motor deficit, ambulatory difficulty, or adverse effects experienced post-blockade.

Conclusions: Addition of the PECS II block to a BPB for proximal upper limb fistula surgeries can be considered. Further studies can be considered to investigate its potential benefit.
Pain, block duration and side effects were recorded until discharge and re-evaluated twenty-four hours after. Diaphragmatic paralysis was assessed using ultrasound.

Results: Until discharge all patients reported no pain or adverse side-effects until discharge. No residual motor block nor diaphragmatic paralysis was observed. Twenty-four hours after discharge only one patient needed per os paracetamol+tramadol for moderate pain (VAS 5). No other complications were reported.

Conclusions: The anesthetic protocol employed in these cases allowed adequate pain control without side-effects, promoting patient satisfaction and early recovery. Diaphragm-sparing nerve blocks with adequate anesthetic coverage proved to be a valid strategy in this setting.

ESRAS-0443
E-PSTER VIEWING

PERIPHERAL NERVE BLOCKS

ANESTHETIC MANAGEMENT OF AN HEMIGLOSSECTOMY IN A “FULL STOMATCH” PATIENT – A CASE REPORT
Correia Martins A.C.1, Lima B.2, Tomé N.1, Artilheiro V.1
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Background and Aims: Anesthetic management in a patient with a full stomach poses challenges to the anesthesiologist: prevention of gastric regurgitation and pulmonary aspiration while instituting an appropriate airway management.

Trachea structures are innervated by the recurrent laryngeal nerve and sympathetic nerve fibers, derived mainly from the middle cervical ganglion.

Cervical plexus block is indicated for tracheostomy, providing analgesia or anesthesia of the neck. Blockade of the cervical plexus could lead to phrenic or recurrent laryngeal nerve block, or interscalene brachial plexus block. There is evidence that superficial cervical plexus blocks are at least equivalent to deep blocks, being significantly safer.

We aim to report a case of full stomach patient submitted to awake tracheostomy, with superficial cervical plexus block.

Methods: Male ASA III scheduled for Tracheostomy, Hemiglossectomy and Radical neck dissection.

Miscommunication leaded to a full stomach patient at the time of the surgery. Both the patient and all the stuff involved decided to go on with the surgery. At first the patient was submitted to bilateral superficial cervical plexus block, enabling awake Tracheostomy, followed by intravenous anesthetic induc- tion and manutention.

Results: Cervical plexus block provided awake tracheostomy without any complications of a full stomach patient and allowed for peri operative analgesia for performing radical neck dissection. Twenty-four hours after surgery the patient was awakened, spontaneously breathing trough the tracheostomy tube. No complications were reported.

Conclusions: In the reported case, cervical plexus block was useful for performing awake tracheostomy in the patient at risk for pulmonary aspiration, to maintain upper airway reflexes intact.

ESRAS-0419
E-PSTER VIEWING

PERIPHERAL NERVE BLOCKS

ASEPSIS AND MONITORING DURING US GUIDED PERIPHERAL REGIONAL ANAESTHESIA BLOCK AT TERTIARY CARE HOSPITAL
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Background and Aims: Ultrasound has revolutionised many practices in anaesthesia and is being used with increasing frequency in the administration of peripheral nerve blocks.

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In an era of increasing bacterial resistance and consequent redundancy of many antimicrobial agents it is imperative that we scrutinise our own practices to maximise patient safety and minimise the transmission/spread of infection.

To this end, we sought to evaluate the current practice surrounding US guided peripheral nerve blockade in our hospital with a view to implementing systematic reform through defined aseptic guidelines.

Methods: Our study included 58 cases, all of which were administered a peripheral or regional blockade under ultrasound guidance.

A questionnaire was handed to the anaesthetic nurses to collect the data.

Results: Of the 58 cases included in the study; single shot (88%), upper limb blocks (52%) were carried out in the majority.

Conclusions: Overall the compliance with both hospital and AAGBI policy in relation to peripheral anaesthesia aseptic technique and monitoring was good and compared favourably with the limited research that exists surrounding such procedures.

ESRA8-0590 E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

DOES CONTINUOUS SCIATIC NERVE BLOCK PROVIDE SUPERIOR PAIN CONTROL TO OPIOIDS IN LOWER LIMB AMPUTATION PATIENTS? A RETROSPECTIVE STUDY.

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Background and Aims: The aim of the study is to compare the postoperative pain scores of the patients between the continuous sciatic nerve block (CSNB) group and without the nerve catheter group.

Methods: We included 41 patients in the sciatic catheter group and 43 patients in the Non-catheter group. All the patients in the Non-catheter group received PCA morphine or strong oral opioid in the postoperative period. Pain scores were analysed on a numerical rating scale of 0–4 (0= no pain, 1= mild pain on movement, 2= moderate pain, 3= severe pain on movement and 4= continual pain).

Results: In the CSNB group 86% of the patients had a pain score from 0 to 2 whereas in the non-CSNB 72.5% of patients had pain scores from 0 to 2. In the CSNB group, 14% of the patients had a pain score of 3 to 4, whereas in the Non-CSNB group 27.5% of patients had a pain score from 3 to 4. When we looked into patients who had the pain score of 0, CSNB group had 68.3% of patients whereas non-CSNB group had 32.2% of patients, which is statistically significant with a P value of <0.05.

Conclusions: This study shows patients managed with continuous sciatic nerve block had better pain relief in the postoperative period and better patient satisfaction and experience during their hospital stay. The limitation of the study is that it is not an RCT nor a blinded study.

ESRA8-0074 E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

A CASE SERIES OF 5,693 PERIPHERAL NERVE BLOCKS AT A DISTRICT GENERAL HOSPITAL IN UK: A RETROSPECTIVE ANALYSIS

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Background and Aims: Our hospital records patient outcomes following regional anaesthesia using an electronic database (iNerve) since 2013. We retrospectively analysed this dataset with an aim to benchmark the safety, effectiveness and patient experience of our service.

Methods: The whole dataset was extracted from the software and groups of data belonging to specific category were populated into different tables. Percentages of each of those individual data were calculated and compared against existing evidences in literature. A literature search in English language, for complications following regional anaesthetic procedures was made in Google Scholar, PubMed and the Cochrane library as part of this project.

Results: A total of 5,693 peripheral nerve blocks were performed in 4 and half years in a total of 4,867 patients. The follow-up review was completed in 88% of inpatients and 23% of day cases of. Of those who responded, 91% of the patients reported excellent to good pain relief. 41% of the nerve blocks were administered for day case surgery allowing early discharge. The quality of data on duration of nerve block was poor and perineural catheter was used only in 6% of patients. The incidence of persistent neurological deficit beyond 7 days was 0.14%, catheter dislodgement rate was 0.26% and unplanned GA conversion rate was 0.8%.

Conclusions: Use of a regional anaesthesia electronic database provides a reliable tool for follow-up in inpatients. It allows continuous monitoring of patient outcomes and operator performance. Our complication rates were comparable to the quoted incidence in literature.

ESRA8-0081 E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

INCIDENCE AND RISK FACTORS OF EQUINUS AFTER ULTRASOUND-GUIDED FEMORAL AND SCIATIC NERVE BLOCKS FOR TOTAL KNEE ARTHROPLASTY

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Background and Aims: Equinus due to damage of the common peroneal nerve is a dreaded complication after total knee arthroplasty (TKA) but can also occur after sciatic nerve block. Therefore, it remains controversial whether sciatic nerve block should be used for TKA.

The aim of this single-center retrospective cohort study was to elucidate the incidence and risk factors of equinus after TKA with the sciatic nerve block.

Methods: After institutional review board approval and informed consent, we reviewed the medical charts of 151 consecutive patients who were classified as ASA-PS 1-2 and underwent TKA under general anaesthesia with continuous femoral nerve block (0.25% levobupivacaine single injection and catheter insertion) and popliteal block (20 ml of 0.125% levobupivacaine single injection) between April 2014 and October 2017.

Those who developed equinus and those who did not were compared using t-test, Mann-Whitney U test, and Fischer’s test where appropriate. A p<0.05 was considered significant.

Results: Equinus occurred in 7 cases (4.6%), and all of them improved by postoperative day 1. Patients with equinus weighed less (48.0 [44.2-58.3] kg vs. 61.1 [54.2-69.0] kg, median [interquartile range], p=0.023) and suffered larger postoperative blood loss (57 ± 110ml vs. 432 ± 273ml, mean ± SD, p=0.015) than those without equinus. Age, sex, surgical and tourniquet times, parahesia, and concurrent diseases such as diabetes mellitus did not differ between the groups (Table 1).

<table>
<thead>
<tr>
<th>Table 1. Patient characteristics and perioperative data</th>
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<tr>
<td>Age (years)</td>
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<tr>
<td>Height (m)</td>
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<tr>
<td>Body weight (kg)</td>
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<tr>
<td>Past medical history (%)</td>
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<tr>
<td>Hypertension</td>
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<tr>
<td>Diabetes</td>
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<td>Periprosthetic arthritis</td>
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<td>Surgery time (min)</td>
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<td>Tourniquet time (min)</td>
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<td>Total intraoperative bleeding (ml)</td>
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<td>&amp;table Cell dirty:width=normal;value-align=align=center;vertical-align=align-middle;cell-gap=cell-gap row-gap=cell-gap column-gap=cell-gap;cell-background-color=cell-background-color row-background-color=cell-background-color column-background-color=cell-background-color;cell-line-height=cell-line-height row-line-height=cell-line-height column-line-height=cell-line-height;cell-white-space=cell-white-space row-white-space=cell-white-space column-white-space=cell-white-space;cell-text-align=cell-text-align row-text-align=cell-text-align column-text-align=cell-text-align;cell-text-decoration=cell-text-decoration row-text-decoration=cell-text-decoration column-text-decoration=cell-text-decoration;cell-text-indent=cell-text-indent row-text-indent=cell-text-indent column-text-indent=cell-text-indent;cell-text-overflow=cell-text-overflow row-text-overflow=cell-text-overflow column-text-overflow=cell-text-overflow;cell-text-transform=cell-text-transform row-text-transform=cell-text-transform column-text-transform=cell-text-transform;cell-text-variant=cell-text-variant row-text-variant=cell-text-variant column-text-variant=cell-text-variant;cell-text-wrap=cell-text-wrap row-text-wrap=cell-text-wrap column-text-wrap=cell-text-wrap;cell-word-break=cell-word-break row-word-break=cell-word-break column-word-break=cell-word-break</td>
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Conclusions: Equinus did occur but was self-limiting. A smaller body weight associated with equinus may indicate that the amount of local anesthetic per body weight may matter.

ESRA-0465
E-PSTER VIEWING
PERIPHERAL NERVE BLOCKS
POPLITEAL SCIATIC NERVE BLOCK TO IMPROVE ISCHEMIC LIMB OUTCOME
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Background and Aims: Ultrasound-guided popliteal sciatic nerve block is a widespread locoregional technique for lower extremity surgery.

Near Infrared Spectroscopy (NIRS) is a current technique used to evaluate cerebral and peripheral tissues oxygenation.

This study aims to determine if regional saturation of Oxygen (rSO2), measured at foot, increases in patients undergoing popliteal block.

Methods: This is a single, institution, prospective and observational study. Seventeen patients were enrolled from January to May 2017.

All patients had lower extremity peripheral arterial disease (PAD), stage II, III, IV Fontaine classification, undergoing endovascular revascularization.

Popliteal sciatic nerve blocks were executed under ultrasound guidance injecting Mepivacaine 1.5% 15ml.

rSO2 values were detected through plantar patches of NIRS on foot at five timepoints: before sciatic nerve block, 5, 15, 30 minutes after the block and at the end of revascularization procedure.

We also registered: non-invasive blood pressure (NIBP) and Oxygen saturation (SaO2).

One way ANOVA is the test utilized to analyze rSO2 data during timepoints. Pearson correlation test has been used to study association between rSO2, NIBP, SaO2.

Results: The statistically significant result (p-value<0.001) we obtained, is one way anova test on rSO2 values of the anesthetized leg. Our results confirm that popliteal sciatic nerve block increases rSO2 of ischemic foot. We hypothesized the block inhibits peripheral autonomic nervous system and it increases microcirculatory and foot oxygenation.

ESRA-0357
E-PSTER VIEWING
PERIPHERAL NERVE BLOCKS
ERECTOR SPINAE PLANE BLOCK AS AN ALTERNATIVE TO EPIDURAL ANALGESIA IN KIDNEY SURGERY: A CASE REPORT
Etienne A.1, Francois B.2, Georges S.2 (Clinique et Maternité Saint Elisabeth Namur, Namur, Namur, Belgium; 2 Hôpital Saint Pierre Ottignies, Ottignies, Belgium.

Background and Aims: The erector spine plane (ESP) block was first described in 2016 by Forero et al. It involves the injection of local anesthetic into the interfacial plane, deep to erector spine muscle (ESM), allowing the blockade of the dorsal and ventral rami of the thoracic spinal nerves. It was initially proposed for analgesia of costal fractures and pulmonary lobectomy.

Methods: We report the case of a left nephrectomy, performed in a 61 years old man. The plan combined general anesthesia with an epidural catheter. After several unsuccessful attempts to place the epidural catheter, we performed a left ESP block. The needle was advanced in plane, and we injected 20 cc of a solution (Levobupivacaine 0.25% with epinephrine 1 / 200.000 and clonidine 75 microgram) deep to ESM at the level of T12.

Postoperative analgesia included piritramide, and PCA piritramide IV pump. Piritramide is an opioid commonly used in Belgium, with an analgesic ratio 0.7 versus morphine.

Results: No opioid consumption on recovery room, only 11 mg on day one, and 9 mg on the day two. The PCA was removed at the beginning of the second day and analgesia was performed only with paracetamol and tradional analgesics.

Conclusions: Although epidural remains the first choice for lombotomy, this reported case shows the potential interest of an ESP block when an epidural is difficult or impossible. ESP block is easy to learn and safe. It would be interesting to think about the insertion of a catheter which could extend the duration of the analgesia.

ESRA-0497
E-PSTER VIEWING
PERIPHERAL NERVE BLOCKS
ANAESTHETIC FACTORS CONTRIBUTING TO NEUROPATHIC PAIN IN ELECTIVE SHOULDER AND ELBOW SURGERY
Fletcher T., Sinha R. Nottingham University Hospitals NHS trust, Anaesthetics, Nottingham, United Kingdom.

Background and Aims: We examined the anaesthetic techniques used in patients following elective shoulder and elbow surgery to see whether they could have contributed to the development of postoperative neuropathic pain.

Methods: We performed retrospective analysis on the case notes of 80 patients assessed for neuropathic pain using S-LANSS screening questionnaire. Specifically, we looked at pre-existing co-morbidities, the anaesthetic technique used, and any documented perioperative anaesthetic complications.

Results: 58 patients had neuropathic pain which resolved post operatively whilst 22 patients went on to develop neuropathic pain. All patients were ASA grade 1-3. Anaesthetic techniques used varied according to the procedure. 79 patients received a brachial plexus nerve block; 74 interscalene, 5 axillary. 62% of these required sedation with up to 4mg of midazolam. 27% of patients received a GA and block, 11% didn’t require sedation. In the awake group 32% required up to 1mg of alfentanil for intra-operative discomfort. Only one incident of paraesthesia during peripheral nerve blockade was documented. This patient was in the group who’s neuropathic pain resolved post operatively. Patients that received a brachial plexus nerve block did not require any additional analgesia in the immediate postoperative phase.

Conclusions: The incidence of neuropathic pain was lower after surgery. All brachial plexus nerve blocks performed were successful for anaesthesia and analgesia. Severe neurological complications following brachial plexus nerve block are rare. The nerve blocks conducted were standardized in terms of equipment and technique and did not appear to contribute to the development of neuropathic pain postoperatively.
Background and Aims: Current literature is poor regarding bilateral plexus blocks. Many factors contribute: bilateral techniques are time consuming, potentially uncomfortable and undertake greater risk of complications. Few situations have indication for it.

Methods: A 62yo. female suffered a car accident resulting in upper limbs' trauma; left – complex wound with multiple fractures and tissue loss; right – complex wound with traumatic amputation. She was submitted to debridement and closure of the proximal end in the amputation injuries and traumatic flaps. Procedure lasted 6 hours, under general anesthesia. At the end, an ultrasound guided bilateral block was performed: right axillary single shot; left supravclavicular single shot + perineural catheter, with ropivacaine 0.375%, 20ml each site. Paracetamol and ketorolac were given. Afterwards, she received a perineural infusion of ropivacaine 2%. She was followed-up by the Acute Pain Team with good pain control throughout. She was further submitted to 4 surgeries. The catheter was removed after 12 days.

Results: We performed a supravclavicular block on the left where the lesions, although distal, involved more proximal regions and were more extensive and likely to require further interventions - and so, having a perineural catheter was convenient. Although there's less risk of phrenic nerve paralyzis, there's higher risk of pneumothorax, which is decreased by ultrasound-guidance. A bilateral supravclavicular block would be relatively contra-indicated given the risk of respiratory compromise. Thus, the supravclavicular+axillary combination was thought to be appropriate.

Conclusions: The indication for bilateral blocks should be evaluated case to case, given the possibility of doubling the risk of complications and risk of local anesthetic toxicity.

PERIPHERAL NERVE BLOCKS

ESPB ANESTHETIC IN NORA FOR BIOPSY OF A THORACIC
VERTEBRAL BODY IN A HIGH ANESTHESIOLOGICAL
RISK PATIENT

E-POSTER VIEWING


Background and Aims: We found extremely interesting the technique proposed by Foreno et al called Erector Spinae plane Block (ESPB) for its ability to provide adequate coverage of the chest wall as well as the underlying visceral structures due to the spread of the anesthetic in the paravertebral and intercostal space.

Methods: A 64-year-old smoker with a history of alcoholism with mild hepatic insufficiency (Child-Pugh = 7) with INR = 2.28, suffering from arterial hypotension (HT), chronic obstructive pulmonary disease (COPD) with bullos enfisama, saturated 92% without supplemental oxygen, operated 7 months before hepatectomies left for hepatocarcinoma. The patient is a candidate for percutaneous biopsy of the vertebral body of D5. After cannulation of adequate venous access and monitoring of the patient's vital parameters we decided to perform a ESPB using 20 ml of 0.5% lidocaine+epinephrine was injected. After about 30 minutes, after the positive result of the cold test and pin prick the procedure was allowed to start.

Results: The patient remained stable throughout the procedure. The anesthetic plan was sufficient to allow to the biopsy needle to be inserted until the bone target is reached and the biopsy sample is taken. The duration of the procedure was 25 minutes from the insertion of the needle.

Conclusions: The ESPB is a simple and safe procedure to perform, in our case has allowed an adequate anesthetic plan that has allowed to avoid general anesthesia in a patient at high risk and in a dangerous environment such as NORA.

ESRB-0277
E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

WRONG SITE BLOCKS: CAN WE PREVENT THESE "NEVER EVENTS"?

E-POSTER VIEWING

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tal, Anaesthetics, Oxford, United Kingdom.

Background and Aims: Performing a unilateral peripheral nerve block (PNB) on the side which is different from the planned surgery is classified by NHS England as a “Never Event”, with various safety systems advocated to prevent a wrong site block (WSB). In our tertiary institution, with over 3,500 block procedures performed annually, a new “Stop Before You Block” (SBYB) policy involving completion of a thorough 2-person check list before performing a PNB was adopted and implemented in spring 2017, following reported WSBs. Adherence to the policy was then audited.

Methods: Two prospective audits of 50 anaesthetic charts with PNBs each were conducted in autumn 2017 and winter 2018 to assess the quality of documenting SBYB checks.

Results: The first audit revealed 62% adherence to the SBYB policy. This instigated further training of staff, with emphasis on better teamwork between Anaesthetists and Anaesthetic Assistants prior to block placement. The second audit (some 6 months later) showed 90% adherence. However, despite improved compliance, fuller WSBs occurred during the study period in which the new policy was either not used, or adequately used. Time pressures, operational issues and patient factors were implicated in the errors.

Conclusions: Adherence to safety checks according to the institutional "SBYB" policy remains the mainstay of preventative measures for WSBs. Workplace stresses will always be present, and efforts to minimize these through team support and checking procedures should be pursued. Understanding of human factors in avoiding errors is essential.

ESRB-0415
E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

AN EFFECTIVE WAY TO DECREASE PAIN AFTER LOWER
EXTREMITY FRACTURE RECONSTRUCTION SURGERIES
USING N. ISCHIADICUS BLOCK.

E-POSTER VIEWING

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Orthopaedics, Anaesthesia and Intensive Care Unit, Riga, Latvia. 2Hospital of Traumatology and Orthopaedics, University of Latvia, Anaesthesiology and Intensive Care Unit, Riga, Latvia. 3University of Latvia, Faculty of Medi-
cine, Riga, Latvia.

Background and Aims: Spinal anesthesia (SA) is most commonly used for performing lower extremity reconstruction surgeries. Peripheral nerve blocks could be method of choice to analgise the region of surgery longer. N. ischiadicus block could be method of choice to analyse the region of surgery longer. N. ischiadicus block (NI) could provide additional analgesia in the perioperative period. The objective of this study is to decrease the post-operative pain level after lower extremity surgeries by using NI.

Methods: Prospective, randomized study was done in Hospital of Trauma-
tology and Orthopaedics, Latvia. Patients who undergone lower leg fracture reconstruction surgery, were divided in two groups: SA group – SA with Sol. Bupivacaine2-4ml 0.5%, depending on BMI; NIb group - SA plus US guided NIb with Sol. Ropivacaine20-40ml 0.375%, depending on BMI. Post-operatively all patients received medication by a standardized multimodal analgesia protocol and self-completed a pain journal. Rescue morphine was
given if the pain ≥ 6 (NRS). Approval of Ethics committee has been granted. The data was statistically processed using SPSS program.

**Results:** Overall 48 patients were randomized – 22 in the SA group; 26 in the NIB group. Statistical significance in post-operative pain level were 2h after surgery (SA group 2.14 vs NIB group 0.22); 4h after surgery (SA group 2.52 vs NIB group 1.01) and 6h after surgery (SA group 2.43 vs NIB group 2.74). No statistical significance was found regarding to the usage of morphine.

**Conclusions:** The combination of SA and NIB improves the level of analgesia for the first 6 hours after lower extremity surgeries. NIB does not affect the use of morphine.

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**ESRA-0223**

**E-POSTER VIEWING**

**PERIPHERAL NERVE BLOCKS**

**BLOCK OF THE VASTUS MEDIALIS, SAPPHENOUS NERVE, AND INTERSPACE BETWEEN THE POPLITEAL ARTERY AND THE CAPSULE OF THE POSTERIOR KNEE IN TOTAL KNEE REPLACEMENT SURGERY**

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1CSI Hospital Sant Joan Despí, 2Moisés Broggi, 3Anesthesiology, Barcelona, Spain.

**Background and Aims:** The femoral block is the most extended analgesic technique for total knee replacement surgery. Current focus on early rehabilitation requires new analgesic approaches with minimal motor alteration. The vastus medialis nerve branch seems to play a greater role than the saphenous nerve in the antero-medial knee innervation. Thus, the combined blockade of these nerves seems a good alternative for the antero-medial area. In order to complete analgesia in the posterolateral area, analgesia could be completed with infiltration of the posterior capsule of the knee.

**Methods:** We evaluated the efficacy and safety of the vastus medialis and saphenous nerve block together with IPACK for analgesia in patients who underwent total knee replacement. Pain score at rest and upon movement was registered during the first 48 hours after surgery, as well as the need for supplemental intravenous analgesia.

**Results:** A total of 52 patients were recorded, 33% male and 67% female. Age was (mean ± SD) 73 ± 8.3. No complications related to technique performance were registered. Pain data (VAS) was recorded as follows: 4 ± 0.87 at baseline; 2.43 ± 1.75 and 4.98 ± 2.11 at 24th static and moving, respectively; and 1.8 ± 1.15 and 4.08 ± 1.53 at 48th static and moving. Requirements of intravenous painkillers during the first 6, 24 and 48 hours post-intervention were 19%, 63% and 41%, respectively. 10% of our patients had postoperative nausea and vomit.

**Conclusions:** The vastus medialis, saphenous nerve block and IPACK technique provides an adequate analgesia in those patients who undergo total knee arthroplasty.

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**ESRA-0340**

**E-POSTER VIEWING**

**PERIPHERAL NERVE BLOCKS**

**DIFFERENTIAL (SENSORY-SELECTIVE) ULTRASOUND GUIDED INFRACLAVICULAR BRACHIAL Plexus BLOCK FOR UPPER EXTREMITY**

Balaban O.1, Güven Köse S.2, Köse H.C.2, Dumlupınar University Faculty of Medicine, Anesthesiology and Reanimation, Konya, Turkey. 2University of Health Science Kartal Dr. Lütfi Kirdar Education and Research Hospital, Anesthesiology and Reanimation, Istanbul, Turkey. 3Maltepe State Hospital, Anesthesiology and Reanimation, Istanbul, Turkey.

**Background and Aims:** Ultrasound guided infraclavicular block was performed using 20 mL 0.5% prilocaine. Sensory block was assessed using numerical scale between 0 and 2 (0: No sense, 1: Sense of touch, 2: Pain). Motor block was assessed using numerical scale between 0 and 5 (0: No contraction, 1: Tendon 2: Ability to move within horizontal plane, 3: Ability to move against gravity 4: Resistance against force 5: Full muscle strength).

**Results:** Differential block was performed in 17 patients (9 female, 8 male). 3 operations were carpal tunnel release, 7 were tendon repair, 6 were ulnar nerve release, and one was mass excision from finger. Mean age was 46.05 ± 12.65. All blocks were successful and surgical anesthesia was achieved. Mean block onset time was 21.76 ± 7.05 minutes. Median motor block score was 3 (1-4). All patients were awake and cooperative during the operation and motor function was preserved. In 15 cases, motor function was sufficient, in 2 cases, motor function was not sufficient with a motor score 1.

**Conclusions:** This case series demonstrates that a differential block is possible at upper extremity with application of ultrasound guided infraclavicular block, using 20 mL of prilocaine in 0.5% of concentration.

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**ESRA-0365**

**E-POSTER VIEWING**

**PERIPHERAL NERVE BLOCKS**

**THE FIRST REPORT OF MOTOR WEAKNESS RELATED ERECTOR SPINAe PLANE BLOCK**

Güven Köse S.1, Köse H.C.2, Balaban O.1, Tulgar S.1,4 University of Health Science Kartal Dr. Lütfi Kirdar Education and Research Hospital, Anesthesiology and Reanimation, Istanbul, Turkey. 2Maltepe State Hospital, Anesthesiology and Reanimation, Istanbul, Turkey. 3Maltepe University Faculty of Medicine, Anesthesiology and Reanimation, Istanbul, Turkey. 4Maltepe University Faculty of Medicine, Anesthesiology and Reanimation, Istanbul, Turkey.

**Background and Aims:** Ultrasound-guided Erector the Spinae Plane Block (ESPB) is a regional anesthesia technique recently described. There are many anecdotal reports of its use as part of a multimodal analgesia plan for postoperative analgesia in different surgical procedures. Herein, we present a case of unexpected motor weakness after ESPB.

**Methods:** A 48-year-old American Society of Anesthesiology (ASA) physical status 1 patient was scheduled to undergo open inguinal hernia repair. The
The patient's surgery was completed uneventfully. In the recovery room, numerical rating Scale (NRS) was 0/10. NRS was < 3/10 during the first 12 hours. At postoperative 2nd hour, the patient complained of difficulty to move his hip joint. Physical examination denoted right lower extremity to have 3/5 strength thigh flexion and 3/5 strength leg extension. The pinprick test revealed a sensory block between the T10-L2 dermatomes. Motor block and sensory block were completely disappeared at 7th and 12th hours, respectively.

Conclusions: It should be kept in mind that, especially in ESPB and other periparavertebral blocks applied from the lower thoracic level, the drug may spread to the lumbar plexus and cause motor weakness.

ESRA8-0453
E-POSTER VIEWING
PERIPHERAL NERVE BLOCKS

EVALUATION OF ULTRASOUND-GUIDED ADDUCTOR CANAL BLOCK WITH TWO DIFFERENT CONCENTRATION OF BUPIVACAINE IN ARTHROSCOPIC KNEE SURGERY. CONTROLLED RANDOMIZED PROSPECTIVE STUDY

Güven Köse S.1, Kose H.C.2, Arslan G.1, Eler Cevik B.1, Tulgar S.1,2
1University of Health Science Karal Dr. Lütfi Kırdar Education and Research Hospital, Anaesthesiology and Reanimation, Istanbul, Turkey. 2Maltepe State Hospital, Anaesthesiology and Reanimation, Istanbul, Turkey. 3Maltepe University faculty of Medicine, Anaesthesiology and Reanimation, Istanbul, Turkey.

Background and Aims: Ultrasound guided Adductor Canal Block (ACB) is an effective regional anesthesia technique that is often used as part of multimodal analgesia in knee surgeons. In this study, we aimed to determine ACB activity with bupivacaine in two different concentrations by comparing the control group and the block groups.

Methods: This prospective, randomized, controlled, double-blinded study included three groups (ACB-0.25, ACB-0.16, and control) with 20 patients each (ASA 1-2, aged >18 years due to undergo arthroscopic knee surgery.) All patients underwent the same general anesthesia regimen. All blocks were performed preoperatively under sedo-analgesia with the application of 15ml of local anesthetic (0.25 % and 0.16% respectively) in experimental groups. In control group, no block was performed. Pain intensity (NRS), PCA tramadol consumption and rescue analgesic requirements were noted for the first 24 hours.

Results: There was no difference between demographic data or type of surgery. While there was no difference in NRS score at any hour between the block groups, tramadol consumption during the first 12 hours tramadol consumption were statistically significantly higher in the control group compared to both block groups. The rescue analgesic requirement was similar in all groups.

Conclusions: While ACB performed with concentrations of 0.25% and 0.16% bupivacaine in the same volume have the similar effect, they improve analgesia quality in patients undergoing arthroscopic knee surgery when compared to a control group.

ESRA8-0444
E-POSTER VIEWING
PERIPHERAL NERVE BLOCKS

CONTINUOUS RECTUS SHEATH BLOCK ASSOCIATED WITH EARLY MOBILISATION AFTER EMERGENCY LAPAROTOMY

Halrow A.1, Broadbent L.1, Shepherd V.2, Milne L.2, Stirling A.2, Grant C.1
1Ninewells Hospital, Dept of Anaesthesia, Dundee, United Kingdom. 2Ninewells Hospital, Acute Pain Service, Dundee, United Kingdom.

Background and Aims: Analgesia after emergency laparotomy is challenging with thoracic epidurals providing the gold standard. However, epidurals are contraindicated in coagulopathy and sepsis. Continuous rectus sheath block is a low risk regional technique, opiate sparing when used as part of a multimodal analgesia approach and may provide equivalent analgesia. Mobility can be maintained by avoiding the use of fixed infusion devices and monitoring with no lower limb sensory impairment.

Methods: A prospective observational study from January to March 2017 of adult patients undergoing emergency laparotomy for any cause admitted to HDU or surgical ward post operatively in a single centre. Analgesic regime was at the discretion of the anaesthetist. Patients were followed up by the acute pain team for four days, noting each day whether the patient had remained in bed, sat out in a chair or had been walking. Permission was obtained from the Caldicott Guardian.

Results: Thirty one patients were followed up, mean age 67 (32 – 97). Nine received thoracic epidural (29%), mean duration 3.1 days; 19 continuous rectus sheath block ± opioid PCA (61%), mean duration 2.4 days; and three an opioid-based regime (10%). Overall 52% female, 48% male; 50% ASA 1-2, 50% ASA 3-4.

Conclusion: The use of continuous rectus sheath block is associated with early mobilisation following emergency laparotomy. Utilisation of this technique may decrease critical care admissions and length of stay, and potentially reduce the incidence of complications compared to opioids alone.

ESRA8-0433
E-POSTER VIEWING
PERIPHERAL NERVE BLOCKS

PATTERN OF SPREAD OF INJECTATE FOLLOWING ERECTOR SPINAE PLANE BLOCK IN HUMAN CADAVER: PRELIMINARY FINDINGS

Hamilton D.L.1,2, Manickam B.P.1, Swamy M.4 James Cook University Hospital, Department of Anaesthesia, Middlesbrough, United Kingdom. 2Hull York Medical School, Department of Anatomy, York, United Kingdom. 4County
Results: Patients received multimodal analgesia including acetaminophen, NSAIDs, ketamine, opioids, and peripheral nerve blockade perioperatively. Pain scores were collected in the PACU prior to discharge and patients were contacted on POD1 and POD2 for assessment. Pain scores varied from 0 to 7 at time of discharge, 0 to 8 on POD1, and 1 to 9 on POD2. None of these patients required catheter replacement or further analgesic intervention.

Conclusions: Intraoperative placement of a brachial plexus catheter under direct visualization is an alternative to traditional methods of catheter placement. This technique allows for direct arthroscopic visualization and additional length between skin insertion site and tip of the catheter, which may allow for reduced catheter dislodgement. Additional cases are needed. This approach merits future comparisons with other techniques for catheter placement.

FIGURE 1. Dye spread

Conclusions: It is likely that the mechanism of action of the ESPB results from widespread passage of local anaesthetic in the thoracolumbar fascial plane, and that the erector spinae plane is continuous anteriorly with the serratus plane. Thus the ESPB is in effect a diffuse cutaneous block. This accounts for variability seen in clinical practice, and is the reason why it is likely to be more useful as an analgesic technique rather than an anaesthetic technique.

ESRA-0370
E-POSTER VIEWING
PERIPHERAL NERVE BLOCKS
A RETROSPECTIVE REVIEW OF COMPLICATIONS RELATED TO INTERSCALENE BLOCKS: A SINGLE CENTER STUDY
Hutchins J., Habek J., Berg A. University of Minnesota, Anesthesiology, Minneapolis, MN, USA.

Background and Aims: Interscalene brachial plexus (ISBP) blocks have commonly been performed to provide post-operative analgesia for patients undergoing shoulder surgery. While effective in minimizing pain there are side effects and complications associated with this block such as diaphragm dysfunction, Horner's syndrome, and nerve injury. The analgesic benefit of using liposome bupivacaine in ISBP blocks was recently published but there is little data on if the use of a long acting local anaesthetic increases the complication rate. The objective of this study was to evaluate if there is an increased complication rate associated with liposome bupivacaine compared to either bupivacaine or ropivacaine ISBP blocks.

Methods: This was a retrospective chart review of all patients who had an interscalene brachial plexus block at the University of Minnesota from January 2013 through April 2018. Patients were divided into groups based on the local anesthetic used for their ISBP block: bupivacaine, ropivacaine, or liposome bupivacaine. Charts were reviewed for incidence of nerve injury, pulmonary complications, readmission rate, failed block, and death.

Results: There were 2500 patients who had interscalene brachial plexus block during this time period. There was no difference between the three groups in the incidence nerve injury, pulmonary complications, readmissions for pain, and deaths.

Conclusions: The use of liposome bupivacaine in an interscalene brachial plexus block does not increase the risk of complications in the early perioperative period when compared to either a bupivacaine or ropivacaine ISBP block.

ESRA-0083
E-POSTER VIEWING
PERIPHERAL NERVE BLOCKS
LOCAL INFILTRATION ANAESTHESIA AND TRANEXAMIC ACID REDUCING BLOOD LOSS AND TRANSFUSION REQUIREMENTS IN TOTAL KNEE ARTHROPLASTY

Background and Aims: Total knee arthroplasty (TKA) may result in blood loss with anaemia and need of blood transfusion. That increases the risk of complications delaying mobilization and increasing length of stay. Multiples strategies have been developed to prevent blood loss, such as use of fibrinolitics agents (like tranexamic acid-TXA) and use of local infiltration anaesthesia (LIA) incorporating vasoconstrictors.

Methods: In this retrospective observational study, 21 patients submitted to primary TKA were recruited. Spinal anaesthesia was performed in all patients. In 11 patients control analgesia (PCA) with femoral nerve block plus catheter was performed. In the other 10 patients, the same femoral nerve block was performed with the addition of LIA technique (Intracapsular: 80 mL Ropivacaine +

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This preliminary study showed a reduction in the drainage volume at post-Anesthesia Care Unit (PACU), transfusional requirements and length of stay. Results: This preliminary study showed a reduction in the drainage volume at post-Anesthesia Care Unit (PACU) in the LIA+TXA group (LIA+TXA group: 240 ± 130; control group: 479 ± 323 p = 0.002). The variation of haemoglobin after 24 hours was greater in the control group (LIA+TXA group: 2.9 ± 0.84; control group: 3.4 ± 1.8 p = 0.43). 4 patients in control group and none in LIA+TXA group was transfused. There were no significant differences between the groups in terms of hospital stay. Conclusions: LIA and TXA in patients undergoing primary TKA seem to decrease postoperative bleeding, variation in haemoglobin and need of blood transfusion. However further studies are needed to establish the benefits.

ESRA®-0251
E-POSTER VIEWING
PERIPHERAL NERVE BLOCKS
A COMBINATION OF E-LEARNING AND CADAVERIC WORKSHOPS IMPROVES CONFIDENCE IN PERFORMING SUPRAINGUINAL FASCIA-ILIACA BLOCKS
James M., Prasad S., Wornack J., Qureshi A., Buckley D., Walker I. Royal Victoria Infirmary, Anaesthetics, Newcastle Upon Tyne, United Kingdom. Background and Aims: Fascia-iliaca blockade for patients with fractured neck of femur (NOF), is a safe and effective alternative to opiate based analgesic regimens, with reductions in opiate requirements, easier patient nursing, and improvements in morbidity. Nerve catheter placement can provide long-lasting, peri-operative analgesia.

Adopting an ultrasound guided suprainguinal approach ensures high rates of success, allows catheter insertion, and is more likely to spread local anaesthetic to the obturator and lateral femoral cutaneous nerves.

Providing sufficient educational opportunities from clinical experience alone has proved difficult in our institution.

We aimed to deliver a novel approach to teaching fascia-iliaca blockade and catheter insertion.

Methods: We developed an online e-learning package, including instructional video and interactive learning package, to ensure solid theoretical knowledge. This was consolidated with two-hour practical sessions on fresh-frozen cadavers, in supervised small groups. During the practical sessions delegates were able to scan, needle, and inject, to maximize familiarity with the procedure.

Catheter kits were available to develop familiarity.

Questionnaires were completed pre e-learning, post e-learning, and post course.

Results: 29 people completed the course and questionnaires. There was a statistically significant, stepwise improvement in the confidence of delegates regarding performing an ultrasound-guided suprainguinal fascia-iliaca block over the three questionnaires; from 48%, to 95%, to 100%. Confidence inserting nerve catheters increased from 10%, to 76%, to 100%.

Conclusions: We have shown that this multimedia style of teaching can be extremely effective in increasing the confidence of trainees and consultants at performing suprainguinal fascia-iliaca blocks, and placing nerve catheters, for the relief of pain from fractured NOF.

ESRA®-0239
E-POSTER VIEWING
PERIPHERAL NERVE BLOCKS
ADDUCTOR CANAL BLOCK AS A PIVOTAL ALTERNATE ANALGESIA IN TOTAL KNEE REPLACEMENT SURGERIES - A PROSPECTIVE RANDOMIZED STUDY
Jayaraman S., koramutla P., Vijay M. BIRRDTH Hospital, Anaesthesiology, Tirupati, India. Background and Aims: Early ambulation and adequate pain relief remains the major concerns after total knee replacement surgery (TKR). Both epidural analgesia and femoral nerve block as post-operative analgesia after knee surgery is limited by their tendency to cause motor block and hence early ambulation. A pure sensory block in the form of Adductor canal block may facilitate early ambulation. Hence the aim of this study was to evaluate the efficacy of adductor canal block for early postoperative pain management in patients undergoing total knee replacement.

Methods: Institutional ethics committee approval and written informed consent from the patients were obtained and 200 patients ASA physical status 1 and 2, undergoing TKR under combined spinal epidural anaesthesia were included. The patients were randomised to receive ultrasound guided adductor canal block with 20ml of 0.25% bupivacaine plus 20μg dexmedetomidine in Group S (study) and Group C (control) did not receive any block after TKR, in the post-operative intensive care units. Postoperative pain was rated using visual analogue score. Epidural infusion was activated using 0.125% bupivacaine at 5ml/hr when the VAS score was ≥ 4 in both the groups and tramadol (100mg intravenous) was administered as rescue analgesia.

Results: The median (IQR) of pain free period for group S was significantly higher than that of Group C (644.65(180-1440min) vs. 242.66(122-360min), p < 0.0001(Mann Whitney U test). patients in group S received less rescue analgesics with p value < 0.001. The haemodynamic and demographic data were comparable between the groups with no statistical significance.

Conclusions: Ultrasound guided adductor canal block provides effective post-operative analgesia after TKR.
ESRA8-0123
E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

A COMPARISON OF THE SUCCESS RATE BETWEEN EPIDURAL BLOCK AND PERIPHERAL NERVE BLOCK IN FOOT SURGERY

Kasuya Y., Goto S., Moriwaki S., Sonnino C., Okayama K., Ozaki M. Tokyo Women's Medical University, Anaesthesiology, Tokyo, Japan.

Background and Aims: Epidural block and peripheral nerve block are both effective in perioperative analgesia. Aim of this study was to compare the incidence of unsuccessful block between epidural block (Epi-Group) and peripheral nerve block (PNB-Group).

Methods: With approval of institutional research board, patients who underwent foot surgery between 2014 and 2017 were retrospectively studied. Anaesthesia was conducted at anaesthesiologist’s discretion. “Unsuccessful block” was defined with the following criteria:

1) If block procedure was technically unsuccessful.
2) If additional analgesics were required just after arousal from general anesthesia.
3) If patients received rescue analgesic within the first 5 postoperative hours.

Time to the first rescue analgesic after surgery and the incidence of unsuccessful block were compared between groups. To clarify the factors determining unsuccessful block, the procedure regimens were thoroughly analyzed.

Results: Epi-Group cases were 33 and PNB-Group cases were 37. Median time to first rescue analgesic was 1681 minutes in Epi-Group and 1610 minutes in PNB-Group (p=0.53)(Fig.1). Incidence of unsuccessful block in Epi-Group was 36.4% and 10.8% in Block-Group (p=0.021)(Fig.2). Epi-Group patients developed postoperative early pain more frequently than PNB-Group. Ultrasound guided PNB technique provides a higher success rate than epidural block. In the detailed analysis, PNB failure was more frequent in the absence of saphenous nerve block in the procedure with medial side of the forefoot. Tailor-made PNB strategy is required for achieving higher success rate.

Conclusions: The incidence of unsuccessful block was lower in PNB than in epidural block.

ESRA8-0142
E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

CHANGES IN FACIAL TEMPERATURE MEASURED USING DIGITAL INFRARED THERMAL IMAGING IN PATIENTS AFTER TRANSNASAL SPHENOPALATINE GANGLION BLOCK

Kim N.E., Won J.H. Inha University, Department of Anesthesiology and Pain Medicine, Incheon, Republic of Korea.

Background and Aims: Sphenopalatine ganglion block is a technique developed in the 1990s for the management of head and neck pain. Recently, transnasal sphenopalatine ganglion block has been used for these patients; however, no objective methods exist for validating the success of TN-SPGB. In this study, we measured the changes in facial temperature before and 30 min after TN-SPGB by using digital infrared thermal imaging to validate its success.

Methods: The medical records of patients who underwent TN-SPGB and DITI between 2016 and 2017 were reviewed. TN-SPGB and facial DITI were performed 36 times in 32 patients. The changes in facial temperatures measured using DITI before and 30 min after TN-SPGB were recorded at the forehead (V1), maxillary area (V2), and mandibular area (V3) and compared. The temperatures on the ipsilateral and contralateral sides of these areas were also compared. The correlation between changes in temperature and pain was analyzed.

Results: After TN-SPGB, the temperature decreased on both sides of V1 (p = 0.0132, 0.0185). No significant difference was observed between the ipsilateral and contralateral sides (p > 0.05). There was no correlation between changes in temperature and changes in pain in the pain regions after the procedure (p > 0.05), however there was a significant correlation between changes in temperature at V1 and pain relief (p = 0.0183).

Conclusions: The temperature decreased significantly at V1 30 min after TN-SPGB compared to before TN-SPGB. Based on these results, we propose using DITI to measure temperature changes as an objective method for verifying the success of TN-SPGB.

ESRA8-0374
E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

ULTRASOUND-GUIDED SUPRACLAVICULAR BRACHIAL PLEXUS BLOCK VERSUS GENERAL ANAESTHESIA FOR PROXIMAL HUMERUS FRACTURE.

Küçükgüçlü S., Gürsoy G., Büyükçoban S. Dokuz Eylül University Hospital, Anaesthesiology and Reanimation, Izmir, Turkey.
Background and Aims: Brachial plexus blocks have more benefits when compared with general anaesthesia for upper limb surgery (eg, improved perioperative analgesia, reduced opioid consumption, shorter post anaesthesia care unit (PACU) stay, quicker discharge). With the widespread use of ultrasound the supraclavicular nerve block has been increased compared to the interscalene block, where complications such as phrenic nerve palsy and voice complaints are frequently encountered. We investigated whether USG-guided supraclavicular block has advantages for better perioperative outcomes with the patients undergoing surgery for proximal humerus fracture.

Methods: After ethical approval, patients who were operated for proximal humerus fracture between 01.01.2017-20.04.2018 were investigated from hospital records, retrospectively. Patient were selected 18 years or older with isolated proximal humerus fracture. Exclusion criteria included pediatric age, politrauma, and communication problem.

Results: A total of 41 patients’ records were obtained. We excluded 10 patients via exclusion criteria. Pain scores were significantly lower in the USG guided supraclavicular block group in both recovery room and wards. Supraclavicular block group had less PACU requirement than general anaesthesia group. For baseline group characteristic and perioperative data (Table 1) Postoperative complications were delirium (n=1), pulmonary complications (n=2) for general anaesthesia group and hoarseness (n=2), hoener syndrome (n=1) for supraclavicular block group.

Conclusions: USG-guided supraclavicular block were found superior than general anaesthesia with better analgesia and lower PACU requirement.

### Table 1 Intra-and postoperative opioids consumption and postoperative pain scores

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group P</th>
<th>Group C</th>
<th>P value</th>
</tr>
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<tbody>
<tr>
<td>Remifentanil (ug/kg/min)</td>
<td>0.34±0.12</td>
<td>0.20±0.07</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Fentanyl (ug)</td>
<td>1.20±0.60</td>
<td>4.00±0.66</td>
<td>0.017</td>
</tr>
<tr>
<td>30min</td>
<td>2.0±0.40</td>
<td>4.1±0.52</td>
<td>0.025</td>
</tr>
<tr>
<td>1 hour</td>
<td>2.35±0.41</td>
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</tr>
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<td>2 hours</td>
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Postoperative pain scores (NR) at different time points, rescue analgesic requirement and adverse reactions were also recorded.

Results: 32 patients in group P and 33 patients in control C completed the study. Intraoperative opioid dosage and postoperative sufentanil consumption in group P were significantly less than group C (P = 0.017). Postoperative pain scores at 30 minutes after surgery in group P was significantly lower than group C (P = 0.028).

### Figure 1.

Conclusions: PECS block for modified radical mastectomy in elderly patients can effectively reduce the consumption of opioids at 24 hours intra-and postoperatively.

E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

PECTORAL NERVES BLOCK CAN REDUCE OPIOIDS CONSUMPTION AFTER BREAST CANCER SURGERY IN ELDERLY PATIENTS IN POSTOPERATIVE 24 HOURS

Lau F., Yin C., Wang T. Xuanwu Hospital, Capital Medical University, Anesthesiology, Beijing, China.

Background and Aims: To evaluate the application value of pectoral nerves block (PECS) on pain management in elderly patients 24 hours after breast cancer surgery.

Methods: 70 female patients aged over 65 years, ASA physical status I-III, undergoing elective unilateral modified radical mastectomy were enrolled. Patients were randomly divided into PECS Group (group P=35) and Controlled Group (group C=35). After general anesthesia induction, patients in group P received ultrasound guided PECS block with 30 ml of 0.375% ropivacaine. Patients in group C did not receive nerve block. Anesthesia maintenance was administered by total intravenous anesthesia (propofol and remifentanil). Dosage of intraoperative remifentanil and postoperative sufentanil consumption from patient controlled analgesia pump in 24 h postoperatively were recorded.

Postoperative pain scores (NR) at different time points, rescue analgesic requirement and adverse reactions were also recorded.

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Conclusions: PECS block for modified radical mastectomy in elderly patients can effectively reduce the consumption of opioids at 24 hours intra-and postoperatively.

E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

SUPREMACY OF SUBTENON'S OVER SHARP NEEDLE TECHNIQUES AND TOPICAL ANAESTHESIA DURING INTRAOCULAR LENS IMPLANTATION INCLUDING REFRACTIVE LENS EXCHANGES

Lerch D., James M. Montanamed Ltd. Sankt Gallen, Eye Anaesthesia, Sankt Gallen, Switzerland.

Background and Aims: To evaluate the supremacy of Subtenon’s in relation to sharp needle regarding safety, efficacy and patient experience on consecutive Subtenon’s performed prior intraocular lens implantation as an exclusively used technique.

Conclusions: USG-guided supraclavicular block were found superior than general anaesthesia with better analgesia and lower PACU requirement.

E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

PECTORAL NERVES BLOCK CAN REDUCE OPIOIDS CONSUMPTION AFTER BREAST CANCER SURGERY IN ELDERLY PATIENTS IN POSTOPERATIVE 24 HOURS

Lau F., Yin C., Wang T. Xuanwu Hospital, Capital Medical University, Anesthesiology, Beijing, China.

Background and Aims: To evaluate the application value of pectoral nerves block (PECS) on pain management in elderly patients 24 hours after breast cancer surgery.

Methods: 70 female patients aged over 65 years, ASA physical status I-III, undergoing elective unilateral modified radical mastectomy were enrolled. Patients were randomly divided into PECS Group (group P=35) and Controlled Group (group C=35). After general anesthesia induction, patients in group P received ultrasound guided PECS block with 30 ml of 0.375% ropivacaine. Patients in group C did not receive nerve block. Anesthesia maintenance was administered by total intravenous anesthesia (propofol and remifentanil). Dosage of intraoperative remifentanil and postoperative sufentanil consumption from patient controlled analgesia pump in 24 h postoperatively were recorded.

Conclusions: PECS block for modified radical mastectomy in elderly patients can effectively reduce the consumption of opioids at 24 hours intra-and postoperatively.
ESRA8-0099
E-POSTER VIEWING
PERIPHERAL NERVE BLOCKS
RESPIRATORY EFFECTS OF INTERSCALENE BRACHIAL PLEXUS BLOCKS
Lim Y.C. Changi General Hospital, Anaesthesia and Surgical Intensive Care, Singapore, Singapore.

Background and Aims: Interscalene brachial plexus blocks (ISB) provides excellent analgesia for arthroscopic shoulder surgeries. However, patients may develop dyspnea due to hemidiaphragmatic pariesis, secondary to phrenic nerve blockade. The aim of this study is to investigate the respiratory effects of ISB.

Methods: Adult patients scheduled for elective arthroscopic shoulder surgery were recruited. We excluded patients with obesity and pre-existing respiratory impairment. Baseline measurement of lung function (Forced vital capacity (FVC), Forced expiratory volume in 1 second (FEV1) and peak expiratory flow rate (PERF)) was performed. Ultrasound was used to measure diaphragmatic excursion bilaterally in the mid-clavicular line.

Ultrasound-guided ISB was performed with 15mls of 0.5% ropivacaine, deposited within the interscalene groove, around the C5 nerve root. After 30 minutes, lung function test and diaphragm excursions were repeated.

Results: Results: presented as mean (SD). FVC decreased by 23%(9.9), FEV1 decreased by 22%(11.4) and PEF decreased by 30%(26.4). Pre-operatively, diaphragmatic excursion bilaterally in the ipsilateral side of the ISB decreased to 0.6 cm (5) post ISB. The diaphragmatic excursion increased on the contralateral side, likely as a compensatory mechanism. However, ISB are able to tolerate the decrease in lung function of 22-30% without becoming symptomatic, likely due to compensatory mechanisms. However, ISB should be performed with caution in patients with risk factors as they may not be able to compensate for the decline in lung function.

ESRA8-0371
E-POSTER VIEWING
PERIPHERAL NERVE BLOCKS
ERECTOR SPINAE PLANE CATHETER IN THE REGIONAL ANESTHESIA CARDIOTHORACIC ENHANCED RECOVERY (RACER) PROGRAM: A RETROSPECTIVE STUDY
Lin C.1, Darling C.1, Boltz G.1, Navantnam M.1, Kamra K.1, Maeda K.2, Tsui C.H.B.1, 2Stanford University, Anesthesiology, Palo Alto, USA, 2Stanford University, Cardiothoracic Surgery, Palo Alto, USA.

Methods: This prospective study included consecutive eye operations on patients that underwent intraocular lens implantation between 2007 and 2018 using subtenon’s anaesthesia.

All patients received subtenon’s blocks using a plastic cannula with the aim to increase efficacy, minimize chemosis and reduce haemorrhage by a novel self-invented anti-haemorrhage technique. Common eye spears are used to drain the blood due to incision as long as the bleeding time last. All patients received mild conscious sedation with the dosage adjusted to age, medical and general condition. Data on outcome and patient satisfaction were collected using a computerized proforma.

Results: Incidence of chemosis was 5.2% and subconjunctival haemorrhage was reported by 5% of patients. Overall, 98% of the patients claimed to be satisfied with procedure and journey. Zero sight threatening/enduring complications, life threatening events or infections occurred.

Conclusions: Subtenon’s anaesthesia with the use of a plastic cannula, in combination with conscious sedation, provides excellent eye immobilization, positively affected patient experience, and reduced common complications associated with regional anaesthesia performed prior to intraocular lens implantation. The modernized technique has a short learning curve. No severe complication occurred. Subtenon's should be preferred as gold standard for IOL procedures and for the most indications for eye operation in adults too.

ESRA8-0253
E-POSTER VIEWING
PERIPHERAL NERVE BLOCKS
COMPARISON BETWEEN COMBINED (DEEP AND SUPERFICIAL) CERVICAL PLEXUS BLOCK WITH LOW-CONCENTRATED LEVOBUPIVACAINE AND ROPIVACAINE FOR CAROTID ENDARTERECTOMY
Martynov D., Tomaschuk D. Rostov State Medical University, Anesthesiology and intensive care, Rostov-on-Don, Russia.

Methods: All patients undergoing bilateral ESP catheters placed as part of RACER protocol were reviewed. Anesthetic management included isoflurane, fentanyl, methadone, dexmedetomidine infusions and ketamine. Lidocaine 0.25% at 1.5 mg/kg/hr maximum total was delivered to each ESP catheter with alternating every hour and levels measured Q8hrs. Pain management protocol included morphine, lorazepam, and fentanyl.

Results: Four patients aged 15 months to 4 years old were reviewed. The average time to extubation was 6.2 hours and CVICU stay was 2 days and 15 hours. The average time to chest tube removal about on day 3. Lidocaine levels ranged from 0.7 to 2.2 mcg/ml. Figure 1 shows the Lidocaine levels for the patients were mostly below therapeutic levels. Chest tubes and ESP catheters were removed on day 3.

Conclusions: To our knowledge, this is first program utilizing bilateral Erector Spinae Plane catheters with the goal of earlier recovery after cardiothoracic surgery requiring cardiopulmonary bypass. No complications such as hemodynamic instability, pneumothorax, and neural injury or paralyisis from a hematoma were noted. The low lidocaine levels confirmed toxicity risk was low. The RACER program with the ESP catheter technique was able to achieve enhanced recovery goals after cardiothoracic surgery with cardiopulmonary bypass.
Background and Aims: Compare the effectiveness of regional anesthesia techniques in carotid endarterectomy using low-concentrated (0.375%) ropivacaine and levobupivacaine solution.

Methods: 42 patients with hemodynamically significant stenosis of the internal carotid artery were included. All patients were randomly assigned to two groups: ropivacaine group (R) - 22 patients, and levobupivacaine group (L) - 20 patients. In both groups, a blockade of deep and superficial cervical plexuses was performed, for which a dilution of the drug 0.375%, in a volume of 30 ml, was used. We studied the duration of the sensory block, the need for analgesics after the operation, and the number of episodes of hemodynamic instability (mean arterial pressure < 60 mm Hg).

Results: Demographic data and ASA were similar between two groups. Onset of sensory block were not statistically different. However, duration of sensory block in group R were significantly shorter than in group L (p<0.05). Time to first analgesic demand and analgesics need were significantly shorter also in group R. In the same time, we registered 12 episodes of hemodynamic instability (MAP < 60 mm Hg) in group L and only 5 cases in the group R, that required a short-term infusion of norepinephrine.

Conclusions: Low-concentrated (0.375%) ropivacaine and levobupivacaine solutions allow to achieve an effective regional blockade for the carotid endarterectomy.

ESRA-0140
E-POSTER VIEWING
PERIPHERAL NERVE BLOCKS

AUDIT OF ANAESTHETISTS’ PRACTICE OF COMPLIANCE AND DOCUMENTATION OF ‘STOP BEFORE YOU BLOCK (SBYB)’ PROCESS

Mehta M., Tariq Z., Patel D., Kaushik V. Leicester General Hospital, Anaesthesia, Leicester, United Kingdom.

Background and Aims: Wrong side block is a listed ‘Never event’ and may imply breach in patient safety and standard of care. Stop before you block (SBYB), a national patient safety campaign recommends a set process to avoid this never event. Following a recent wrong side regional block in our hospital, we conducted this baseline audit to evaluate anaesthetists’ practice for complying and documenting the SBYB.

Methods: Standards were set as 100% compliance with the SBYB process and documentation. After clinical governance approval, anaesthetists’ practice for complying and documenting SBYB was independently monitored by an anaesthetist. Following information was recorded- WHO sign in completion, visualising surgical arrow, side confirmation with patient (if awake) or with consent form (if asleep patient) and documentation of correct side and SBYB.

Results: A total of 54 cases were included over three months. The regional blocks performed were interscalene (26%), supraclavicular (4%), axillary (18%), lumbar plexus (2%), femoral (28%), femoral and sciatic (22%). These were performed as sole anaesthetic technique (26%), with sedation (6%), spinal (46%) or GA (22%).

Conclusions: Our audit demonstrates a suboptimal compliance with the SBYB process. We recommend use of SBYB process in the WHO checklist and emphasise assertive pre-procedure double confirmation of the same with the ODP. We recommend the use of educational posters, training videos and mock drills to increase awareness and behaviour change. We plan to re-audit next year, to re-assess our clinical practice.

References:

ESRA-0263
E-POSTER VIEWING
PERIPHERAL NERVE BLOCKS

ULTRASOUND-GUIDED RADIAL NERVE BLOCK TO RELIEVE CANNULATION-INDUCED RADIAL ARTERIAL SPASM.

Mishra S.1, Bhakta P.2, Zahir H.2, 1Aberdeen Royal Infirmary, Anaesthesia and Intensive Care, Aberdeen, United Kingdom, 2Cork University Hospital, Anaesthesia and Intensive Care, Cork, Ireland , 3University Hospital Kerry, Anaesthesia and Intensive Care, Tralee, Ireland.

Background and Aims: Use of arterial line is routine practice in anaesthesia and ICU. But many times arterial cannulation induced trauma leads to arterial spasm and tense flush and blood could be aspirated easily. Normal arterial waveform was obtained, arterial line could be flushed and blood could be aspirated easily.

Methods: Both patients had significant medical illness complicated with arteriopathy. They required radial arterial cannulation for ICU management. Radial artery was cannulated just proximal to the wrist and was technically difficult requiring multiple attempts. Normal arterial waveform was obtained, arterial line could be flushed and blood could be aspirated easily.

Results: After 4 hours the arterial waveform began to dampen, and disappeared completely after another 2 hours. Blood also could not be aspirated. After ruling out obvious mechanical causes we performed an ultrasound guided radial nerve block to relieve RAS. After about one hour, the waveform assumed a normal appearance and blood could be aspirated easily. We assumed that sympathetic postganglionic fibres accompanying the radial artery were blocked by this intervention resulting diminution of sympathetic tone, which was the cause of RAS.

Conclusions: We thus conclude that peripheral sympathetic block is a safe and effective solution to relieve RAS.

ESRA-0306
E-POSTER VIEWING
PERIPHERAL NERVE BLOCKS

STOP JUST BEFORE YOU BLOCK

Misurati M., Bertok S., Jones L., Singh A. Royal Wolverhampton NHS Trust, Anaesthetics, Wolverhampton, United Kingdom.

Background and Aims: Since introducing Stop Before You Block in our hospital, we have had 2 wrong side blocks performed by anaesthetists.

Case 1:
- Surgical marking has been applied in the anaesthetic room
- Changeover of ODPs during the preparation time towards the block
- No stop before you block check was done

Case 2:
- The published list was amended because of a change of anaesthetist
- The description of the procedure on operating list did not begin with the side (R or L)
- Change of the running order of the list due lack of equipment for the start of the list
- Anaesthetist was distracted between the block check and applying the block because of unnecessary conversation with colleague, hence The Stop Before You Block did not take place immediately before the block
- The block took place without the correct site being visible

Results: Stop Before You Block campaign made it clear that the check should be done IMMEDIATELY before needle insertion. After much thought and research as to how we can improve safety for patients undergoing nerve blocks, Stop JUST Before You block has been introduced to minimise the occurrence of wrong side block.

Conclusions: WHO anaesthetic room checklist as usual.
- Stop JUST Before You Block posters.
- Introducing STOP BOX:
  - Physical reminder to STOP
  - Drawn up nerve block drugs, the ampoules and the block needles are placed inside.
  - Keeps LA drugs separate from IV drugs minimising risk of drug errors.
  - STOP before you open the box to retrieve the drugs.

FIGURE 1.
The box is only opened IMMEDIATELY prior to needling.

ESRA-0272
E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

IMPLANTATION OF THE SUBCUTANEous IMPLANTABLE CARdioverter-DEfibrillator WITH TRUNCAL PLANE BLOCKS: EXPANDING ERAS TO CARDIOLOGY
Montgomery M.1, Saltor B.1, Mittnacht A.1, Garg J.2, Miller M.3, Weiner M.1
1Mount Sinai School of Medicine, Anesthesia, New York, USA, 2Mount Sinai School of Medicine, Cardiology: Electrophysiology, New York, USA.

Background and Aims: The subcutaneous implantable-cardioverter defibrillator (S ICD) implant procedure requires dissection in the chest wall and tunneling of a para-sternal lead. As such, the procedure is usually performed under GA and post-operative pain is substantial. As such, we introduced an ERAS protocol in two stages to address these limitations. In stage one, we performed adjunctive truncal plane blocks (serratus anterior fascial plane and transversus thoracic plane). In stage two, we transitioned from GA to MAC and incorporated non-opioid alternatives for analgesia.

Methods: Retrospective analysis of three anesthetic regimens for S ICD implantation. Cohort 1 (n =10): GA and local wound infiltration. Cohort 2 (n =10): GA and truncal plane blocks. Cohort 3 (n =5): Pre-treatment with non-opioid analgesics, MAC, truncal plane blocks and post-operative ketorolac. Total in-hospital opioid consumption was calculated as milligram morphine equivalents (MME).

Results: In the first 12 hours, opioid consumption was significantly lower in the patients that received deep sedation with truncal plane blocks (cohort 3, MME = 0), as compared to patients that received GA with truncal plane blocks (cohort 2, MME = 45; p = 0.007) or the patients that received GA-only (cohort 1, MME = 75; p = 0.007).

Conclusions:
We have demonstrated that the S ICD implant procedure can routinely be performed under MAC without the use of intra-operative narcotics, and that ERAS-style interventions prior to and during the surgical implant can significantly reduce in-hospital opioid consumption.

ESRA-0190
E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

ANALGESIC EFFICACY OF COMBINED SINGLE SHOT PECTORAL NERVE BLOCK II AND CONTINUOUS PECTORAL NERVE BLOCK I FOR IMMEDIATE TISSUE EXPANDER PLACEMENT AFTER MASTECTOMY
Murata H., Hida K., Hara T. Nagasaki University School of Medicine, Department of Anesthesiology, Nagasaki, Japan.

Background and Aims: Immediate tissue expander placement after mastectomy is associated with severe postoperative pain. Pectoral nerve block (Pecs) I and II are reported to provide adequate analgesia for...
breast expander placement and mastectomy, respectively. We examined the perioperative analgesic efficacy of combined single shot Pecs II and continuous Pecs I for immediate tissue expander placement after mastectomy.

**Methods:** This study was approved from the Institutional Review Board and written informed consent was obtained from each patient. A retrospective chart review of patients undergoing unilateral immediate tissue expander placement after mastectomy under general anesthesia between May 2015 and April 2018 was performed. Intraoperative opioid consumption and postoperative analgesics use, pain, nausea and food intake were investigated. A p value < 0.05 was considered statistically significant.

**Results:** A total of 22 patients were analyzed. 14 patients received Pecs blocks (Group P), and 8 patients received no nerve blocks (Group N). Intraoperative remifentanil consumption was significantly less in Group P than in Group N [mean (standard deviation), μg/kg/min]: 0.16 (0.05) vs 0.23 (0.07). The number of rescue analgesic use in the first 24 h after surgery was significantly less in Group P than in Group N [mean (standard deviation): 0.29 (0.61) vs 2.00 (1.51). Although not significantly different, the amount of food intake of Group P on postoperative day 1 was more than that of Group N.

**Conclusions:** Combined single shot Pecs II and continuous Pecs I provided excellent perioperative analgesia for immediate tissue expander placement after mastectomy.

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ESRA8-0284

**E-POSTER VIEWING**

**PERIPHERAL NERVE BLOCKS**

**PROSPECTIVE AUDIT IN REAL WORLD: PILOT TRIAL OF E-CLINICAL AUDIT DATABASE TOOL (MOBILE APP) ON PERIPHERAL NERVE BLOCKS: 6 MONTH REPORT OF NATIONAL DATABASE**

Murthy G.¹,² ¹Wakefield Anaesthetic group, Anaesthesia, Adelaide, Australia, ²Medusys, Data science technologies, Bangalore, India.

**Background and Aims:** Anaesthetists across the world are unable to do audits and are frustrated for many reasons. They rarely have the time and resources. Having a paper or web based data entry is not the solution as it labour intensive and prone for errors with poor participation.

A novel mobile app based database project aims to facilitate the collection of consistent quality assurance data to enable current and future benchmarking of Regional anaesthesia practice across all countries.

**Methods:** A mobile app based and web interface was commercially released in July 2017 in India. Individual practitioners and departments obtained licence through secure process and user agreements. Basic statistics is built-in and downloadable any time.

Our database environment has tight monitoring controls along with HIPAA compliance features to assure patient privacy is kept secure.

**Results:** Date range: 2/11/2017 to 3/5/2018

Users: 175

A total of 1338 cases and 1838 PNBs were recorded

**Basic Characteristics:**

1 in 4 patients had block in post-op period

60% of patients had orthopaedic procedure

Safety and Quality:

94.6% of patients had correct site check, 84.6% had lipid rescue available

Ultrasound probe cover wasn’t used in 25.4% of blocks

Block Characteristics:

27.3% of blocks were used as sole anaesthetic.

1 in 3 blocks had adjuvant use

Outcome:

7.73% failure rate

1 patient had LA toxicity (0.05%)

89.9% of patients rated high satisfaction scores.

**Conclusions:** This Indian database has given valuable insight into practice and outcomes of regional anaesthesia in India.

This innovation will improve audit participation, provide real world data to national database for benchmarking and potential to improve safety and quality of regional anaesthesia practice.
70% had their surgery performed under ICB only. The rest requested Nair G.

Twenty-three adult patients scheduled for hand surgery participated in the study. Considering the artery as a clock face with 12 o’clock ventral, the median duration of catheter use was 2 days. Pain scores (NRS) during the first three days followed by intermittent boluses of 10ml of ropivacaine 0.2% every 2 hours. The patients received a loading bolus between 20 and 30ml of ropivacaine 0.5% mid-thoracic, low-thoracic or low-lumbar level, according to the type of surgery. Blocks were performed at a general anesthetist. in our hospital, from September 2017 to April 2018. The statistical analysis was done with SPSS (version 23).

Results: We analyzed 37 patients. Procedures ranged from plastic, thoracic, orthopedic, gynecologic and general surgery (table 1). Blocks were performed at a mid-thoracic, low-thoracic or low-lumbar level, according to the type of surgery. Patients received a loading bolus between 20 and 30ml of ropivacaine 0.5% followed by intermittent boluses of 10ml of ropivacaine 0.2% every 2 hours. The median duration of catheter use was 2 days. Pain scores (NRS) during the first three post-operative days varied from 0 to 1.4 at rest and 2.3 to 4.0 with movement (table 2). No other rescue medication was needed. No adverse effects were recorded.

Conclusions: This analysis shows that postoperative analgesia with continuous erector spinae plane block can be a valid choice for various surgical procedures. Cumulative evidence of good analgesic efficacy, safety profile and ease of handling could prove this block to be an attractive alternative when neuraxial blockade is not deemed suitable or easily manageable.

**ESRA Abstracts**

### PERIPHERAL NERVE BLOCKS

**ESRA-0017**

**E-POSTER VIEWING**

**PERIPHERAL NERVE BLOCKS**

**ULTRASOUND GUIDED INFRACORACOID-INFRACLAVICULAR BLOCKS FOR DAY CASE UPPER LIMB SURGERY - EVALUATION OF PATIENT EXPERIENCE AND SERVICE FROM A DISTRICT GENERAL HOSPITAL**

Thottungal A.\(^1\), Nair G.\(^2\) 1Kent & Canterbury Hospital, Department of Anaesthesia & Pain Management, Canterbury, United Kingdom, 2Guy's and St Thomas' NHS Foundation Trust, Department of Anaesthesia, London, United Kingdom.

Background and Aims: Hand and upper limb surgeries are routinely performed as ambulatory procedures. The anaesthetic used for these surgeries is either a general anaesthetic (GA) or a regional anaesthetic (RA) alone or in combination. RA provides adequate analgesia with the additional benefit of rapid recovery and discharge after surgery. This study evaluates the level of patient satisfaction and acceptance of the use of RA for ambulatory surgery.

Methods: Data was collected prospectively for 81 consecutive patients who had received an ultrasound guided infracoracoid infraclavicular block (ICB) for hand surgery. Various aspects of patient experience were evaluated by interviewing them prior to discharge using a questionnaire. We also collected postoperative data for 47 patients who consented to a telephone interview a week after surgery.

Results: 70% had their surgery performed under ICB only. The rest requested sedation or GA in addition to ICB. 98% were highly satisfied with their experience during block insertion and having surgery under RA. 95% had no pain during their stay in hospital. 85% experienced no pain during the night of surgery. 55% had block duration more than 24 hours. 98% patients were very satisfied with their experience. 94% believed that RA helped in faster recovery and discharge. 98% would opt to have surgery under RA again and would recommend it to family and friends.

Conclusions: ICB as a RA technique was shown to be safe, effective and well tolerated; most patients were satisfied with this option for day case hand and upper limb surgery.

**ESRA-00450**

**E-POSTER VIEWING**

**PERIPHERAL NERVE BLOCKS**

**CONTINUOUS ERECTOR SPINAE PLANE BLOCK IS A VALID POSTOPERATIVE ANALGESIC ALTERNATIVE IN VARIOUS SURGICAL PROCEDURES**

Carrió A., Ribeiro D., O’Neill P., Duarte F., Ghira M. Hospital Beatriz Angélo-Loires- Portugal, Anesthesiology Department, Loires, Portugal.

**Background and Aims:** The erector spine plane block, first described by Forero et al in 2016 for thoracic neuropathic pain, has gained popularity as an alternative technique to neuraxial post-operative analgesia.

**Methods:** We performed a retrospective analysis of the records of the patients that received a continuous erector spine plane block for postoperative analgesia, in our hospital, from September 2017 to April 2018. The statistical analysis was done with SPSS (version 23).

**Results:** We analyzed 37 patents. Procedures ranged from plastic, thoracic, orthopedic, gynecologic and general surgery (table 1). Blocks were performed at a mid-thoracic, low-thoracic or low-lumbar level, according to the type of surgery. Patients received a loading bolus between 20 and 30ml of ropivacaine 0.5% followed by intermittent boluses of 10ml of ropivacaine 0.2% every 2 hours. The median duration of catheter use was 2 days. Pain scores (NRS) during the first three post-operative days varied from 0 to 1.4 at rest and 2.3 to 4.0 with movement (table 2). No other rescue medication was needed. No adverse effects were recorded.

**Conclusions:** This analysis shows that postoperative analgesia with continuous erector spine plane block can be a valid choice for various surgical procedures. Cumulative evidence of good analgesic efficacy, safety profile and ease of handling could prove this block to be an attractive alternative when neuraxial blockade is not deemed suitable or easily manageable.

**ESRA-0217**

**E-POSTER VIEWING**

**MINIMUM EFFECTIVE VOLUME OF ROPIVACAINE 7.5 MG/ML TO BLOCK THE POSTERIOR AND LATERAL CORDS OF THE INFRACLAVICULAR BRACHIAL PLEXUS**

Musso D.\(^1\), Klæstad Ø.\(^1\), Wilsgaard T.\(^2\), Ytrehus L.M.\(^1\) 1UIT - The Arctic University of Norway, Department of Anesthesiology- University Hospital of North Norway, Tromsø, Norway, 2UIT - The Arctic University of Norway, Department of Community Medicine, Tromsø, Norway.

**Background and Aims:** We recently showed that the novel combination of a superficial cervical plexus block, a suprascapular nerve block, and the lateral sagittal infraclavicular brachial plexus block (LSIB) provides an alternative anesthetic method for arthroscopic shoulder surgery. In the present study we hypothesized that the LSIB dose for this shoulder block could be significantly reduced by injecting only towards the shoulder relevant posterior and lateral cords. Our aim was to determine the minimum effective volume in 50% of the patients (MEV\(_{50}\)) and to estimate the MEV\(_{95}\) when using ropivacaine 7.5 mg/ml to block these cords.

**Methods:** Twenty-three adult patients scheduled for hand surgery participated in the study. Considering the artery as a clock face with 12 o’clock ventral, the in-plane technique was used. Block success was assessed 30 minutes after withdrawal of the needle. Successful posterior cord block was defined as anesthesia or analgesia, or >50% motor deficit of Community Medicine, Tromsø, Norway.

Results: MEV\(_{50}\) and MEV\(_{95}\) were 7.8 ml (95% confidence interval (CI), 7.3 – 8.4) and 9.0 ml (95% CI, 7.8 – 10.3), respectively.

Conclusions: For single deposit infraclavicular posterior and lateral cord block, the MEV\(_{95}\) of ropivacaine 7.5 mg/ml was estimated to 9.0 ml.
**Table 1 - Post-operative analgesia with continuous erector spinae plane block**

<table>
<thead>
<tr>
<th>Surgical specialty</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Surgery</td>
<td>20 (54.1%)</td>
</tr>
<tr>
<td>Supra-mesoclave space</td>
<td>13 (65%)</td>
</tr>
<tr>
<td>Intra-mesoclave space</td>
<td>6 (30%)</td>
</tr>
<tr>
<td>Radial muscularity</td>
<td>1 (5%)</td>
</tr>
<tr>
<td>Plastic Surgery</td>
<td>2 (4%)</td>
</tr>
<tr>
<td>Latissimus flap breast reconstruction</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>Nerve-nerve resection</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>Thoracic Surgery</td>
<td>8 (21.6%)</td>
</tr>
<tr>
<td>Rib fracture</td>
<td>2 (5.4%)</td>
</tr>
<tr>
<td>Modified Ravitch procedure</td>
<td>1 (2.7%)</td>
</tr>
<tr>
<td>Abdominal resection of the right lower lobe</td>
<td>3 (8%)</td>
</tr>
<tr>
<td>Described of pterygium</td>
<td>2 (5.4%)</td>
</tr>
<tr>
<td>Orthopedics</td>
<td>6 (16.2%)</td>
</tr>
<tr>
<td>Total hip replacement</td>
<td>4 (10.6%)</td>
</tr>
<tr>
<td>Cephalothesis of femoral fracture</td>
<td>2 (5.4%)</td>
</tr>
<tr>
<td>Gynaecology</td>
<td>1 (2.7%)</td>
</tr>
<tr>
<td>Radical muscularity</td>
<td>1 (2.7%)</td>
</tr>
<tr>
<td>Level of block (n %)</td>
<td></td>
</tr>
<tr>
<td>TS</td>
<td>6 (27.3%)</td>
</tr>
<tr>
<td>TV</td>
<td>10 (45.5%)</td>
</tr>
<tr>
<td>LT</td>
<td>6 (27.3%)</td>
</tr>
</tbody>
</table>

**Continuous catheter management (n %)**

Ropivacaine concentration
- Ropivacaine 0.15%: 5 (13.5%)
- Ropivacaine 0.2%: 32 (85.5%)

Ropivacaine volume
- 0ml: 30 (81.1%)
- 1ml: 2 (5.4%)
- 2ml: 2 (5.4%)
- 3ml: 3 (8.1%)

Time between ropivacaine administrations
- 1h: 5 (13.5%)
- 2h: 23 (62.2%)
- 3h: 5 (13.5%)

Duration of catheter use (days) - median (IQR)
- 6 (1)

**ESRA-0087**

**E-POSTER VIEWING**

**PERIPHERAL NERVE BLOCKS**

**INTRA VENOUS REGIONAL ANESTHESIA VERSUS AXILLARY NERVE BLOCK FOR AMBULATORY HAND SURGERY: A PROSPECTIVE, RANDOMIZED TRIAL**

Outtier S., Rex S., Van de Velde M., Teunenkens A. University Hospitals Leuven, Anesthesiology, Leuven, Belgium.

**Background and Aims:** Regional anesthesia is a popular alternative for general anesthesia in ambulatory hand surgery, resulting in faster recovery and discharge times. Two commonly applied techniques are intravenous regional anesthesia (IVRA) and axillary nerve block (AB). Traditionally, analgesic efficacy, adverse events and safety are studied to compare regional anesthesia techniques. In our study, we aim to evaluate patient satisfaction with both techniques.

**Methods:** After obtaining ethical committee approval and written informed consent, 120 patients undergoing hand surgery were included in this prospective trial and randomized into the IVRA-group and the AB-group. Patient satisfaction was assessed using a validated questionnaire.

**Results:** The primary outcomes showed no significant difference in satisfaction scores between the two groups. However, patients in the IVRA-group reported significantly fewer adverse events compared to the AB-group. No significant differences were found in surgical outcomes or postoperative pain scores.

**Conclusions:** Intravenous regional anesthesia provides comparable analgesia to axillary nerve block for ambulatory hand surgery, with the added benefit of lower adverse events.

**Table 1**

<table>
<thead>
<tr>
<th>EVAS/JP</th>
<th>Bar's Block</th>
<th>Axillary Block</th>
<th>HI, (95%) CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score</td>
<td>6 (10.67%)</td>
<td>6 (10.67%)</td>
<td>0.05 (0.00, 0.10)</td>
</tr>
<tr>
<td>Attention</td>
<td>6 (10.67%)</td>
<td>6 (10.67%)</td>
<td>0.05 (0.00, 0.10)</td>
</tr>
<tr>
<td>Discomfort</td>
<td>6 (10.67%)</td>
<td>6 (10.67%)</td>
<td>0.05 (0.00, 0.10)</td>
</tr>
<tr>
<td>Viscosity</td>
<td>6 (10.67%)</td>
<td>6 (10.67%)</td>
<td>0.05 (0.00, 0.10)</td>
</tr>
<tr>
<td>Pain</td>
<td>6 (10.67%)</td>
<td>6 (10.67%)</td>
<td>0.05 (0.00, 0.10)</td>
</tr>
<tr>
<td>Gender</td>
<td>6 (10.67%)</td>
<td>6 (10.67%)</td>
<td>0.05 (0.00, 0.10)</td>
</tr>
<tr>
<td>Male</td>
<td>3 (5.00%)</td>
<td>3 (5.00%)</td>
<td>1.00 (0.50, 2.00)</td>
</tr>
<tr>
<td>Female</td>
<td>3 (5.00%)</td>
<td>3 (5.00%)</td>
<td>1.00 (0.50, 2.00)</td>
</tr>
<tr>
<td>Age</td>
<td>4 (6.67%)</td>
<td>4 (6.67%)</td>
<td>1.00 (0.50, 2.00)</td>
</tr>
</tbody>
</table>

**Notes:**
- Bar’s Block: Bar’s nerve block.
- Axillary Block: Axillary nerve block.
- HI: Hazard ratio.
- CI: Confidence interval.

**TABLE 1**

<table>
<thead>
<tr>
<th>Table 2 - Post-operative pain and side effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain scores on day 1 post-op</td>
</tr>
<tr>
<td>At rest, Mean ± SD 1.4 ± 1.7</td>
</tr>
<tr>
<td>With movement, Mean ± SD 4.3 ± 2.6</td>
</tr>
<tr>
<td>Pain scores on day 2 post-op</td>
</tr>
<tr>
<td>At rest, Median (IQR) 0 (2)</td>
</tr>
<tr>
<td>With movement, Mean ± SD 2.3 ± 2.2</td>
</tr>
<tr>
<td>Pain scores on day 3 post-op</td>
</tr>
<tr>
<td>At rest, Median (IQR) 0 (2)</td>
</tr>
<tr>
<td>With movement, Mean ± SD 2.5 ± 2.4</td>
</tr>
<tr>
<td>Post-operative side effects (n %)</td>
</tr>
<tr>
<td>Headache and vomiting, 13 (25.5%)</td>
</tr>
<tr>
<td>Nausea, 1 (2.7%)</td>
</tr>
<tr>
<td>Other side effects, 3 (6.1%)</td>
</tr>
<tr>
<td>No side effects, 27 (53.8%)</td>
</tr>
</tbody>
</table>

**ESRA-0113**

**E-POSTER VIEWING**

**INTERSCALENE BRACHIAL PLEXUS BLOCK FOR SURGICAL REPAIR OF CLAVICLE FRACTURE: A MATCHED-STUDY**

Olofsson M.1, Tafti B.2, Kyle Robert K.3, Frédéric N.4, Bénédicte M.1, Albrecht E.1 1Centre Hospitalier Universitaire Vaudois, Department of Anesthesiology, Lausanne, Switzerland, 2Centre Hospitalier Universitaire Vaudois, Institute of Social and Preventive Medicine IUMSP, Lausanne, Switzerland, 3Toronto Western Hospital, University of Toronto, Department of Anesthesiology, Toronto, Canada, 4Centre Hospitalier Universitaire Vaudois, Department of Orthopaedic, Lausanne, Switzerland.

**Background and Aims:** Clavicle innervation is complex and debated, with scarce data on the impact of regional anesthesia for analgesia after surgical repair of clavicle fracture. We report a case-matched cohort study of patients undergoing clavicle fracture fixation performed under general anesthesia with or without an interscalene brachial plexus block (ISB).

**Methods:** Fifty consecutive patients with middle/distal clavicle fracture scheduled for surgical fixation under general anesthesia with or without ISB were prospectively enrolled. This cohort was compared to a historical control of 76 retrospective patients without regional block. The primary outcome was total intravenous morphine equivalent consumption at 2 postoperative hours. Secondary outcomes included perioperative sufentanil administration, intravenous morphine equivalent consumption at 24 postoperative hours, and resting pain scores at 2 and 24 postoperative hours. To assess the ISB impact, we performed both an overall cohort analysis and a case-matched analysis with each ISB-treated patient matched to a Non-ISB-treated patient. Matching employed a 1-to-1, nearest-neighbor approach using the Mahalanobis metric.

**Results:** In the overall cohort, patients with ISB had significantly lower IV morphine equivalent consumption at 2 postoperative hours (0.7mg [95%CI: 0.1-1.2] vs controls 8.8mg [95%CI: 7.1-10.4]; p<0.0001). Secondary outcomes were also significantly reduced, except resting pain scores at 24 postoperative hours. These results persisted after case-matching the cohorts (mean difference for the primary outcome: 8.3mg [95%CI: 6.5-10.0; p<0.001).**

**Conclusions:** ISB provides effective analgesia after surgical fixation of middle/distal clavicle fracture. Our results suggest clinically relevant clavicle innervation mainly from branches of the brachial plexus. These results should help physicians establishing analgesic strategy for this type of surgery.
satisfaction as the primary outcome was assessed with the EVAN-LR questionnaire. Secondary outcomes included induction time, tourniquet time, discharge time and length of hospital stay, block quality, pain scores, need for supplemental analgesia and conversion to general anesthesia (GA).

**Results:** There was no difference in patient satisfaction between the IVRA-group and the AB-group (table 1). Induction time, hospital stay and discharge time were significant longer in AB-group (p < 0.001). Intravenous postoperative pain scores were significantly higher and tourniquet time was longer in the IVRA-group (p < 0.001), but no difference in need for supplemental analgesia or conversion to GA was found. No differences were found in block quality, nor in pain scores and need for supplemental analgesia after discharge.

**Conclusions:** Patients undergoing IVRA were equally satisfied as patients with AB, and had a shorter induction time, discharge time and hospital stay. However, higher pain scores with IVRA suggest the need for a more appropriate pain management for these patients.

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**ESRA8-0301 E-POSTER VIEWING**

**PERIPHERAL NERVE BLOCKS**

**EFFECT OF SUPRASCAPULAR AND AXILLARY NERVE BLOCK ON SEVOFLURANE CONSUMPTION AND POSTOPERATIVE PAIN RELIEF IN ARTHROSCOPIC SHOULDER SURGERY**

Ozkan D1, Cemaloglu S2, Catma M.F2, Akkaya T3 1University of Health Diskapi Yıldırım Beayzit Training and Research Hospital, Anesthesiology and Reanimation Department, Ankara, Turkey, 2University of Health Diskapi Yıldırım Beayzit Training and Research Hospital, Orthopedics and Traumatology Clinic, Ankara, Turkey, 3University of Health Diskapi Yıldırım Beayzit Training and Research Hospital, Anesthesiology and Reanimation Clinic, Ankara, Turkey.

**Background and Aims:** The aim of this study was to evaluate the effects of a preoperative suprascapular and axillary nerve block on sevoflurane consumption, postoperative pain, analgesic consumption and visualization of the arthroscopic field in arthroscopic shoulder surgery.

**Methods:** Forty-three patients undergoing arthroscopic shoulder surgery were randomized to receive either a suprascapular and axillary nerve block with ultrasound guidance (20 ml 0.25% bupivacaine) or a subacromial local infiltration (20 ml 0.25% bupivacaine) prior to general anesthesia (Group SSAX, n = 22) or a subacromial local infiltration (20 ml 0.25% bupivacaine) after the procedure (group control, n = 21). End-tidal sevoflurane consumption, visualization of the arthroscopic field scores of the patients were recorded during the procedure. Patients’ postoperative pain scores, tramadol consumption were also recorded

**Results:** The end-tidal sevoflurane concentration values were similar in both groups (p > 0.05). Group SSAX had better mean static pain score in the PACU (Group SSAX: 4.27 ± 1.48 vs Group C 6.24 ± 1.90 p < 0.05). Tramadol consumption was lower in group SSAX than in group C (253.1 ± 85.3 mg vs 324.2 ± 72 mg, p = 0.005). Visualization of the arthroscopic field scores were lower in group SSAX than in group C along the intraoperative period (p < 0.05).

**Conclusions:** Suprascapular and axillary nerve blocks are effective in postoperative analgesia at rest, may reduce tramadol consumption and provide a clean image in the arthroscopic area of arthroscopic shoulder surgery, but these blocks may not reduce sevoflurane consumption.

ClinicalTrial.gov identifier: NCT032121445.

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**ESRA8-0229 E-POSTER VIEWING**

**PERIPHERAL NERVE BLOCKS**

**CONTINUOUS LUMBAR PLEXUS BLOCK FOR TOTAL HIP REPLACEMENT USING THE SHAMROCK METHOD: A CASE REPORT**


**Background and Aims:** Lumbar plexus (LP) block is a successful technique for postoperative analgesia following lower extremity surgery. Several ultrasound (US) guided techniques have been described. The most promising is the Shamrock Technique, based on recognizing three muscles around the transverse process (TP) of L-4: Quadratus Lumborum (QL), Erector Spinae (ES) and Psoas Major (PM), which together form a “shamrock” sign. (Fig. 1)

We used this method to perform continuous LP block for postoperative analgesia in a 50 years old man who underwent total hip replacement.

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**ESRA8-0158 E-POSTER VIEWING**

**PERIPHERAL NERVE BLOCKS**

**TO ASSESS THE ANALGESIC EFFICACY OF COMBINED PECTORAL NERVE BLOCKS (PECS I & II) IN BREAST SURGERIES: A RANDOMIZED CONTROL TRIAL**

Pandey R1, Mutheryil N2, Darlong V3, Punj J4, Sinha R5, Singh P.M.1, Chandraleka C1, Srivastava A3 1All India Institute of Medical Sciences, Anaesthesiology- Pain Medicine and Critical Care, New Delhi, India, 2All India Institute of Medical Sciences, Anaesthesiology- Pain Medicine & Critical Care, New Delhi, India.

**Background and Aims:** In breast surgeries, poorly controlled acute postoperative pain may lead to chronic pain. In this study we evaluated the analgesic efficacy of ultrasound guided PECS I & II in patients scheduled for breast surgeries. We assessed the following: total fentanyl and time to first analgesic requirement (VAS ≥ 3), and any limitation of operative shoulder movements at 4, 5, 6, and 24 hours after surgery.

**Methods:** Sixty adult women, aged 18-70 years, ASA physical status I or II having carcinoma breast were included in this trial. All patients were randomly allocated into Group P: Study group and Group C: Control group. In Group P, patients received both GA and USG PECS I & II with 30 ml 0.25 % Ropivacaine. In Group C, patients received only GA. Post-operatively, all patients received PCA (fentanyl 10μg/ml, lockout interval-15min). We noted pain intensity at rest and during abdication of operated side upper limb at 30 minutes, 1, 2, 3, 4, 5, 6 and 24 hours after surgery in both the groups. Results: Group P showed significant reduction in total fentanyl requirement in first 24 hours as compared to Group C and the difference between two groups was 171 microgram [138.40-202.59] (95% CI: p value < 0.001). The mean time required for first analgesia was significantly longer. Limitation of shoulder movements was significantly less in Group P (p value < 0.001).

**Conclusions:** Combined PECS I & II with GA in modified radical mastectomy surgeries have reduced total fentanyl requirement, prolonged the time for first analgesia requirement with no limitation of shoulder movements on the operated side.
Postoperative analgesia resulted excellent, as the patient had a maximum level to deposit Ropivacaine 0.2% 5 mL/h. (Fig. 3) Multimodal analgesia included ketorolac IV 60 mg/24h. Ropivacaine 0.2% 5 mL/h. (Fig. 3) Multimodal analgesia included ketorolac IV 60 mg/24h. The catheter was removed after 48 h and the patient was discharged on postoperative day 3.

Conclusions: The Shamrock technique has the great advantage of allowing full needle control and anatomic structures visualization, allowing an easy and successful insertion of a catheter near the LP.

ESRA8-0071
E-POSTER VIEWING
PERIPHERAL NERVE BLOCKS
SERRATUS-INTERCOSTAL BLOCK IN PATIENTS UNDERGOING LAPAROSCOPIC SURGERY FOR PHEOCHROMOCYTOMA
Perez Herrero M. 1LE Anestesiología y Reanimación, Hospital Clínico Universitario, Valladolid, Spain.

Background and Aims: Regional anesthesia is associated with decreased risk of complications after major surgery1, but central blocks effects remain controversial in pheochromocytoma.

Our aim was to analyze analgesic utility of serratus-intercostal block in patients undergoing laparoscopic surgery for pheochromocytoma.

Methods: Retrospective study in 4 patients (3 women and 1 man), 40 +/- 2.3 aged, who underwent laparoscopic surgery for pheochromocytoma in general anesthesia associated with serratus intercostal block. After invasive monitoring, every patient was induced and maintained as usual and intubated, we performed the block in supine position patient. We placed the linear high frequency (8-15 Hz) probe in axillary ipsilateral midline as the figure, we inserted the needle between serratus and external intercostal muscles at 8-9º level to deposit Ropivacaine 1% 15 cc.

We registered surgery duration, overall number and duration (minutes) of hypertensive emergencies and arrhythmias. One patient (the oldest one and with the largest tumour) suffered a cardiac arrest; she was reanimated with chest massage and adrenalin perfusion without complications.

The patients were asked for EVA perioperative and outpatient complications one week and one month after surgery.

Results: Postoperative pain was 3 (SD-1.46) in immediate postoperative period, 4 (SD-2.4) one week after surgery, and 0 one month later. Overall mean number of hypertensive intraoperative emergencies was 4.41 (SD-2.45). No other complications.

Conclusions: Serratus-intercostal block is a useful analgesic technique to perform laparoscopic surgery to pheochromocytoma in our series. There was higher pain intensity EVA levels one week after surgery than the other moments we measured.

ESRA8-0354
E-POSTER VIEWING
PERIPHERAL NERVE BLOCKS
COMBINING TWO REGIONAL ANAESTHETIC TECHNIQUES FOR MODIFIED RADICAL MASTECTOMY IN TWO PATIENTS WITH COPD CARRYING HIGH RISK FOR GENERAL ANAESTHESIA
Pillai V. 1, Ramesh B. 2 1Regional Cancer Centre, Anaesthesiology, Thiruvananthapuram, India, 2Regional Cancer centre-Thiruvananthapuram - Kela-India, Anaesthesiology, Thiruvananthapuram -Kela-India. India.

Background and Aims: The chest wall is mainly innervated by the intercostal nerves and also by the supraneural nerves from the cervical plexus in the upper part close to the clavicle. Axilla is mainly supplied by the intercostobrachial nerve whereas retraction of the Pectoral major, Pec minor, serratus anterior and latisimius dorsi during surgery requires the nerves supplying these muscles also to be blocked which originate from the brachial plexus.

Methods: Two female with similar history of COPD with exacerbation was scheduled for modified radical mastectomy. Both the patients were optimised with antibiotics and bronchodilators. Thoracic paravertebral block was given with full needle control and anatomic structures visualization, allowing an easy and successful insertion of a catheter near the LP.

Conclusions: Combining thoracic paravertebral block and pectoral block provides excellent surgical anaesthesia for MRM with good intravenous sedation.

ESRA8-0184
E-POSTER VIEWING
PERIPHERAL NERVE BLOCKS
BILATERAL ERECTOR SPINAE PLANE BLOCKS AS AN ALTERNATIVE TO EPIDURAL IN A PATIENT ON CLOPIDOGREL
Prior C., Knaggs A., Bellew B. St Mary's Hospital- Imperial College Healthcare NHS Trust, Anaesthetics, London, United Kingdom.

Our aim was to analyze analgesic utility of serratus-intercostal block in patients undergoing laparoscopic surgery for pheochromocytoma.
Background and Aims: A 63-year-old, ASA 4, female patient with a 12 cm abdominal aortic aneurysm due to type II and III endoleaks required a laparotomy via rooftop incision. She was bedbound with significant cardiac, respiratory and renal disease and on clopidogrel for a coronary stent. Bilateral erector spinae plane catheters (ESPC) were used for analgesia in place of epidural to avoid the risk of epidural haematoma.

Methods: Following general anaesthesia, bilateral ESPC were placed under ultrasound guidance. An initial bolus of 20 mL of 0.25% levobupivacaine was given bilaterally. Post-operatively, an infusion of plain 0.125% levobupivacaine was commenced at 10 mL per hour through each catheter. She required multiple blood products intra-operatively including 28 units of packed red cells.

Results: On postoperative day 2, she was able to cough comfortably and was successfully extubated. The ESPC were removed on day 4 post surgery.

Conclusions: The addition of epidurals to general anaesthesia can reduce the 30-day mortality following high-risk surgery and provide excellent analgesia. However, these are contra-indicated in patients requiring some anti-platelet therapies. It is recognised that regional nerve blocks may provide a safer alternative. The ESPC has been shown to be efficacious for abdominal surgery but as this is a relatively new procedure, the risk of haemorrhagic complication is not described in current guidelines. We suggest that ESPC may provide a safer alternative to epidurals in patients on clopidogrel.

ESRA-0206
E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

REPORTED SENSATIONS OF PERIPHERAL NERVE BLOCK: “MY ARM IS DEAD”

Reeve K., Barnes J., Barr J., Nava S., Allan A. Great Western Hospital, Anaesthetic Department, Swindon, United Kingdom.

Background and Aims: There is a paucity of literature describing the sensation of having a peripheral nerve block (PNB) performed. We aimed to evaluate patients’ reported sensations of having a PNB performed, how it felt intra-operative, any discomfort felt and whether anaesthetists’ preoperative descriptions match patient experience.

Methods: A postoperative survey of patients who had undergone awake surgery under PNB was conducted on the day of surgery. Patients who received sedation or general anaesthetic were excluded. Our study was discussed with our local ethics committee and informed patient consent was obtained.

Results: Eighteen patients met the inclusion criteria, 13 undergoing upper limb and five lower limb surgery. The anaesthetist described limb sensation to 16 patients (89%). Anaesthetists used nine words to describe having a PNB, commonly; “numb” (10), “heavy” (4) and “dead” (3).

Describing the sensation of PNB onset, patients used 14 different words including “tingling” (6), “pins and needles” (3) and “heavy” (3). Describing post-operative sensation, 16 words were used, including “heavy” (7), “numb” (7) and “dead” (5). Patients’ descriptions were more varied than those offered by the anaesthetists.

The median discomfort score (0=no discomfort, 10=very uncomfortable) during PNB insertion was 1 (range 0-7) and intraoperative discomfort score was 0 (range 0-2).

Seventeen patients (94%) described the experience as positive.

Conclusions: The majority of patients do not find PNB performance uncomfortable and would recommend it to a friend. Anaesthetists accurately describe the feeling of a dense PNB, however, often fail to describe the sensation of block onset, which can be strange for patients.

ESRA-0276
E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

EQUIPMENT USAGE AND SUCCESS IN ULTRASOUND-GUIDED PERIPHERAL NERVE BLOCK (UPNB) BY PREVIOUSLY TRAINED RESIDENTS.

Rueda V.1, Meléndez H.J.2, Orozco E.2 1Dra Viviana P. Rueda Rojas, Anestesiología, Bucaramanga, Colombia, 2Universidad Industrial de Santander, Anestesiología, Bucaramanga, Colombia.

Background and Aims: In our institution, starting in 2016, ultrasound training was started using simulated models and the ultrasound machine was acquired.

Our objective was to describe the use of the variables in the equipment handling, the success and the complications in the supraclavicular (UPNB) application, done by anesthesiology residents previously trained in simulated models from a Colombian university.

Methods: Descriptive and analytical study. The evaluation was made by anesthesiologist who was an expert in ultrasound, in the clinical scenery and by a video in the ultrasound machine screen. The study was approved by the ethical committee institutional.

Results: They were made 156 evaluations in 12 residents, which were analyzed according to the year they were coursing (R1/R2/R3/R4). The variable interpretations, the image optimization and the needle visualization, they showed statistically significant differences between the residents. The variables that depend of the time weren’t different. When reviewing the number of punctures, a value was presented at the limit of the significance, with a single puncture in favor of the R2 and R4. See table N° 1.

The only complication presented was arterial puncture at 0.64% (1),Table 2 and Figure 1.

Conclusions: The previous instruction in simulated models guarantees us the better interaction with the equipment, it increases the probability of success and minimizes the complications risks, when compared with literature reports of blockages made by anatomical repairs. The success rate tends to be higher in the resident evolution. The ultrasound machine should be part of the anesthesiologist's equipment, and its use should be considered as a good clinical practice.
ESRA-0308

E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

AN OLD APPROACH TO A NEW BLOCKADE - THE EFFECT OF POPLITEAL PLEXUS BLOCKADE AFTER TOTAL KNEE ARTHROPLASTY

Runge C.1, Bjørn S.2, Jensen J.2, Niels N.3, Vase M.1, Holm C.1, Bendtsen T.2

Silkeborg Regional Hospital, Elective Surgery Centre, Silkeborg, Denmark, Aarhus University, Anaesthesiology, Aarhus, Denmark, Aarhus University, Elective Surgery Centre, Silkeborg, Denmark.

Background and Aims: A subinguinal obturator nerve block and a femoral triangle block (FTB) provide effective analgesia after total knee arthroplasty (TKA). The popliteal plexus (PP) in the popliteal fossa is formed by contribution from the tibial nerve and the posterior obturator nerve, innervating the posterior aspect of the knee. An injection of dye in the distal adductor canal spreads to the popliteal fossa and stains the PP in cadavers. We hypothesized, that this popliteal plexus block (PPB) as a supplement to an FTB would reduce pain after TKA without anaesthetising motor branches from the sciatic nerve in the popliteal fossa.

Our aim was to assess the analgesic effect of adding a PPB to an FTB in 10 subjects with significant pain after TKA in a feasibility study.

Methods: All subjects underwent unilateral TKA with spinal anaesthesia and received an FTB. Primary outcome was the proportion of subjects with pain above numeric rating scale (NRS) 3 followed by a reduction to NRS ≤3, after conducting a PPB. Other outcomes were the PPB onset time, the ankle muscle strength.

Results: Ten subjects with a median pain of NRS 5.5 (IQR 4-8) after TKA received a PPB. All subjects experienced a reduction in pain to NRS ≤3 (NRS1.5 (IQR 0-3)) within 8.5 [95%CI 6.8-10.2] minutes. Three subjects were completely pain-free after the PPB. The ankle muscle strength was not compromised.

Conclusions: The PPB provided effective pain relief without compromising the ankle muscle strength in all subjects with significant pain after TKA and an FTB.

ESRA-0471

E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

INTRODUCTION OF A BLOCK TROLLEY = A MOBILE BLOCK ROOM

Sadeghi A., Tay A., Haddad S., Natarajan S., Bellew B.

St Mary’s Hospital, Anesthetics, London, United Kingdom.
Background and Aims: Regional anaesthesia has demonstrated numerous benefits including better analgesic outcomes than general anaesthesia with systemic opioids, decreased post-operative nausea and vomiting rates & increased patient satisfaction. As a result we have seen a surge in popularity; in particular with the widespread availability of ultrasound imaging.

Despite this, obstacles cited include anaesthetic room delays which often hinder the routine use of such techniques. Thus creating an area with access to all the appropriate equipment would help to overcome this.

Methods: The current economic climate and space limitations often prevent the creation of designated “block rooms” and thus we created a “block trolley”. Containing all necessary drugs and equipment in one location, this essentially creates a mobile block room that can be taken to any clinical area.

Surveys were taken of consultant anaesthetists and operating room practitioners (ODPs) at our trauma centre before and after trolley implementation to assess the impact on provision of regional anaesthesia.

Results: Pre-introduction surveys indicated that that 54% of ODPs and consultants stated “lack of equipment” slowed down the provision of regional anaesthesia and 86% of ODPs and 67% of consultants felt the introduction of a “block trolley” would be useful. The introduction of the trolley put all equipment/drugs in an accessible location and consequently 89% of consultants and 95% of ODPs who had used it stated it had been useful.

Conclusions: Implementation of “block trolleys” may improve accessibility to regional anaesthesia in departments without the space or resources for a designated block room.

ESRA8-0402
E-POSTER VIEWING
PERIPHERAL NERVE BLOCKS
INCREASING PATIENT SATISFACTION FOR UPPER LIMB ANAESTHESIA: A LOCAL SERVICE IMPROVEMENT PROJECT
Saha S., Milewczyk S. Royal Surrey County Hospital, Anaesthesia, London, United Kingdom.

Background and Aims: Patient satisfaction is an important measure of quality of healthcare and as a tool for improving services. At our trust upper limb surgery is mainly performed as day cases under general anaesthesia (GA) after single shot peripheral nerve blocks. The aim of this project was to evaluate and improve patient satisfaction with regional and general anaesthesia in this patient group.

Methods: A questionnaire was developed and distributed prospectively over a 2 week period to patients after their operation and 48 hours later through an online survey. The questionnaire had 2 parts: satisfaction with the nerve block/analgesia and satisfaction with general anaesthesia.

Results: All patients were satisfied/very satisfied with the information provided about nerve blocks pre operatively, although 52% would have also liked an information leaflet. The most severe pain started at a median of 24 hours after surgery (range 6.5-48 hours). Patient satisfaction with pain control at home is shown in Figure 2.

100% and 90% of patients would choose to have a block again when asked on the day of surgery and 48 hours later respectively. Chart 3 shows the patient satisfaction with GA results. All patients were very satisfied with the care provided by the anaesthetic department.

Conclusions: These baseline results demonstrate high levels of patient satisfaction with regional anaesthesia and general anaesthesia. Based on the results a patient information leaflet, thirst prevention strategy and a heat loss prevention strategy have been introduced, with plans to repeat the process in 3 months and focus on block follow up.

ESRA8-0086
E-POSTER VIEWING
PERIPHERAL NERVE BLOCKS
COMBINED ADDUCTOR AND POPLITEAL NERVE BLOCK FOR HIGH RISK PATIENTS: CASE SERIES
Sahin A.S., Ay N., Derbent A., Salihoğlu Z., Acikgoz A. 1 Kanuni sultan suleyman education and training hospital, Department of Anesthesiology and

FIGURE 1.

FIGURE 2.

FIGURE 3.
Reanimation, Istanbul, Turkey. 2 Nordstat Krankenhaus Hannover, Department of Anesthesiology and Reanimation, Hannover, Germany.

**Background and Aims:** Popliteal and adductor blocks were placed using ultrasound guidance are more advantageous for patients with high pulmonary and cardiac risk that have increased preoperative, perioperative and postoperative complications. Peripheral nerve blocks are associated with minimal hemodynamic changes and an ideal method for high-risk surgical patients. In this case series, we present combined Adductor and Popliteal nerve blocks with ultrasound guidance for lower extremity surgery in 3 patients with high pulmonary and cardiac risk.

**Methods:** Three female patients (58-, 73-, and 75-years-old) presented for cardiac fractures. They had severe mitral/aortic failure or tricuspid failure. In operating room, patients were admitted to the supine position for adductor nerve block. The block was performed through the ultrasound guided method, using a linear high frequency 6-18MHz ultrasound probe (Esaote, MyLab™Five) and 50-mm-Stimuplex® needle (B.Braun, Melsungen, Germany). An in-plane approach was used and 15ml 0.5% bupivacaine+5ml 2% lidocaine was given. For popliteal block, patients were admitted to the prone position, and same ultrasound probe and Stimuplex needle were used and 15ml 0.5% bupivacaine+5ml 2% lidocaine was given. In the popliteal nerve block, medication was performed after observed plantar flexion at 0.5mA in the stimulator.

**Results:** Adequate motor (bromage 2) and sensory block formation was allowed surgical intervention. During surgery they had no pain and hemodynamic changes. No postoperative complications were observed and discharged postoperatively 2 day.

**Conclusions:** In conclusion, combined Adductor and Popliteal nerve blocks can use successfully in patients with high pulmonary and cardiac risk and that blocks provided faster bladder function recovery and faster discharging from hospital and associated with significantly lower pain scores postoperatively.

**ESRA8-0026**

**E-POSTER VIEWING**

**PERIPHERAL NERVE BLOCKS**

**EPINEURIAL INJECTION OF LOW VOLUME 0.5% LEVOBUPIVACAINE FOR INTER-SCALENE BLOCK**

Hulgur M., Sawyer A., Sarda S. Wrightington- Wigan and Leigh NHS Foundation Trust, Anaesthetics, Wigan, United Kingdom.

**Background and Aims:** Traditionally, Inter-scalene blocks (ISB) were considered high volume blocks, with up to 20-30mL of local anaesthetic (LA) being administered around the brachial plexus. There was high incidence of complications, due to LA spread, including phrenic nerve palsy (100%), Horner’s syndrome and recurrent laryngeal nerve palsy; causing hoarseness. Widespread use of ultrasound has allowed reduced volumes (10-20mL) of LA. Despite this the incidence of complications hasn't significantly reduced.

Our study aims to evaluate the efficacy of low volume ISB (5mL, 0.5% Levbupivacaine) and access the rate of symptomatic complications.

**Methods:** Approval was obtained from the trust clinical governance team. Thirty-two patients undergoing elective shoulder arthroscopic procedures, consented for awake ultrasound-guided ISB and postoperative telephone follow-up prior to general anaesthesia. 5 mL of 0.5% Levbupivacaine was injected into the epineurium, under direct vision, between roots C5-C6. Patients were called after 48 to 72 hours and questioned about pain scores, symptoms of complications, and patient satisfaction.

**Results:** Twenty-four patients were included, one withdrew consent on follow-up, 7 were uncontactable. All patients were comfortable on the day of surgery. Pain score overnight ranged from 0-5 (median 0) whilst at 24 hours was 0-9 (median 5). None complained of hoarseness (0%) or Horner syndrome (0%). 2 patients complained of shortness of breath (8.3%) and 7 had paraesthesia (29.2%) resulting within 48 hours.

22 patients scored 5/5 on satisfaction (92%) and 2 scored 4/5 (8%).

**Conclusions:** Epineural low volume ISB provide effective analgesia and appears to have lower incidence of clinical side effects. Risk of neuronal damage remains low, in keeping with current literature.

**ESRA8-0026**

**E-POSTER VIEWING**

**PERIPHERAL NERVE BLOCKS**

**AN EVALUATION OF PATIENT EXPERIENCE FOR AWAKE ARTHROSCOPIC SHOULDER SURGERY**


**Background and Aims:** Interscalene block is commonly performed to provide post-operative analgesia for shoulder surgery. Due to patient co-morbidity or choice, regional anaesthesia alone may be the preferred technique. We sought to evaluate patient experience of awake shoulder surgery at our centre, focusing on intraoperative efficacy and patient satisfaction.

**Methods:** We conducted a survey of patients following awake arthroscopic shoulder surgery (sub-acromial decompression, rotator cuff repair, capsular release and acromioclavicular joint excision). All patients were verbally consented for telephone follow-up at time of pre-operative assessment.

Patients received ultrasound guided interscalene blocks with a supravacular nerve block, using a mixture of 10mL 0.5% levobupivacaine and 10mLs 2% lignocaine with 1/200,000 adrenaline (Xylocaine®) in total. Motor block of the proximal upper limb was confirmed prior to positioning for surgery. Arthroscopic port sites were infiltrated with 1% Xylocaine® by the operating surgeon. Patients remained awake but were offered midazolam sedation if preferred. Verbal contact was maintained throughout.

**Results:** Twenty-five patients were contacted for telephone follow-up, demographics are shown in Table 1. All patients were satisfied with the preoperative explanation of the conduct of anaesthesia and surgery. 48% had some recollection of surgery, but none were troubled by this. 92% experienced no discomfort during surgery. The remainder reported mild discomfort from positioning, or sensation of heat without pain. All patients were satisfied with their experience, stating they would be happy with an awake anaesthetic technique in the future.

**Conclusions:** With appropriate patient preparation, awake regional anaesthesia for arthroscopic shoulder surgery is both effective and a positive patient experience.

**ESRA8-0244**

**E-POSTER VIEWING**

**PERIPHERAL NERVE BLOCKS**

**EFFECT OF INTERSCALENE VERSUS SUPRACLAVICULAR PLEXUS BLOCKADE FOR POSTOPERATIVE ANALGESIA AND MORPHINE CONSUMPTION AFTER SHOULDER SURGERY - A SYSTEMATIC REVIEW ANDMETA-ANALYSIS**

Schubert A.K., Dinges H.C., Wulf H., Wiesmann T. Philipps University Marburg, Anesthesiology and Intensive Care Medicine, Marburg, Germany.

**Background and Aims:** Interscalene (ISC) plexus blockade is the most common regional anaesthesia technique to alleviate pain after shoulder surgery. However, ISC is associated with ipsilateral hemi-diaphragmatic paresis due to unwanted ipsilateral phrenic nerve block. Horner’s syndrome and hoarseness. The supravacular approach (SC) might be an effective alternative with fewer side effects. This question was yet not adequately addressed in a meta-analysis.

**Methods:** A comprehensive literature search in Embase, Central, Medline and Web of Science yielded 517 studies. 17 randomized controlled trials were analysed for eligibility. Eight studies were included in this meta-analysis. Primary endpoints were pain scores until 24 hours after surgery as well as total morphine equivalents (MEQ) consumed. Secondary endpoints were serious adverse events e.g. phrenic palsy, Horner’s Syndrome. A random effects model was used.

**Results:** SC approach showed overall comparable pain scores (Mean Difference -0.51, (-1.07, 0.04) 95%-Confidence Interval) and not significantly
different consumption of MEQs (Mean Difference 2.2, (-0.01, 4.4) 95%-Confidence Interval). Secondary endpoint analysis revealed a significantly lower rate of phrenic nerve palsy (Risk Ratio 0.66, (0.55, 0.78) 95%-Confidence Interval), Horner’s syndrome (Risk Ratio 0.3, (0.19, 0.48) 95%-Confidence Interval) as well as hoarseness (Risk Ratio 0.62, (0.36, 1.06) 95%-Confidence Interval) with SC.

Conclusions: SC provides comparable postoperative analgesia and morphine consumption for the first 24 hours after shoulder surgery. Side effects were less common in the SC group. Thus, the supraclavicular approach is an efficient alternative to the traditional interscalene approach for shoulder surgery and provides lower rates of unwanted side effects.

ESRA8-0294

E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

AFTER BILATERAL PROXIMAL HUMEROUS SURGERY, RETROCLAVICULAR APPROACH OF INFRACLAVICULAR BRAQUIAL PLEXUS BLOCK PRESERVES DIAPHRAGMATIC FUNCTION WITH GOOD POSTOPERATIVE PAIN CONTROL. A CASE REPORT.

Sempere Mata M.1, Rovira Soriano L.2, Izquierdo Aicart A.2, Úbeda Pascual J.2, Biosca E.2, De Andrés J.2. 1Consortio Hospital General Universitario, Department of Anaesthesia- Critical Care and Pain Management, Valencia, Spain, 2Consortio Hospital General Universitario, Department of Anaesthesia- Critical Care and Pain Management, Valencia, Spain.

Background and Aims: The interscalene block (ISB) is the gold standard block for shoulder and proximal humerous surgery, but this causes phrenic block and hemidiaphragmatic palsy in 99% of cases. For this reason, bilateral ISB is contraindicated. When infraclavicular block is performed with retroclavicular approach (IBRA), the ultrasound beam is perpendicular to the needle and allows better needle visualization and better catheter placement.

Methods: A 19-year-old girl was scheduled for trauma surgery with bilateral complex humeral fracture diagnosis. She did not have any other medical history. We realized bilateral IBRA to avoid bilateral diaphragm paralysis and insert catheters to control postoperative pain. We used 15 ml of Levobupivacaine 0,375% + mepivacaíne 1% in each one. After this, we performed general anesthesia with laringeal mask because the surgery was long and the surgical position was bothersome. TIVA with propofol and remifentanil was used to maintain general anesthesia. During surgery, blood pressure and heart rate kept stable. Postoperative pain was recorded at 2h and 24h. No pain at right arm and mild pain (VAS<4) at left arm. She didn’t suffer disphnea, desaturation or any respiritory symptom.

Results: Results are shown in Table 1.

Conclusions: We studied diaphragm function before and after block. Thickening Fraction (TF) obtained showed that IBRA preserves diaphragmatic function after block with good postoperative pain control.

TABLE 1.

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Right</th>
<th>Left</th>
<th>T (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRE BLOCK</td>
<td>0.28</td>
<td>0.19</td>
<td>100%</td>
</tr>
<tr>
<td>POST BLOCK</td>
<td>0.30</td>
<td>0.17</td>
<td>91%</td>
</tr>
<tr>
<td>PRE BLOCK</td>
<td>0.26</td>
<td>0.12</td>
<td>120%</td>
</tr>
<tr>
<td>POST BLOCK</td>
<td>0.26</td>
<td>0.12</td>
<td>115%</td>
</tr>
</tbody>
</table>

FIGURE 1.

FIGURE 2.

FIGURE 3.

ESRA8-0322

E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

EXTRAORDINARY PROLONGED BLOCKADE FOLLOWING AXILLARY BRACHIAL PLEXUS BLOCK

Sezer E.1, Özhan M.O.2, Çaparlar C.1, Sützer M.A.2. 1University of Health Sciences- Doksapt Yıldırım Beayzat Training and Research Hospital,
A 90-year-old ASA II man with hypertension was scheduled for Regional Anesthesia and Pain Medicine at Moorfields Eye Hospital, Anaesthetics, London, United Kingdom.

Background and Aims: Brachial plexus blocks (BPB) are favoured techniques with high success and low complication rates, especially in older patients. We aimed to report a prolonged block following an axillary BPB.

Methods: A 90-year-old ASA II man with hypertension was scheduled for open reduction and fixation under tourniquet for forearm fracture. Preoperative examination and laboratory tests were normal.

BPB was performed using a nerve stimulator. After obtaining appropriate muscle twitches in response to 0.5-0.8 mA stimulations, 10 ml 2% lidocaine and 15 ml 0.5% bupivacaine were injected which were followed by cessation of muscle twitches without pain.

Surgery was completed in 65 minutes without any complication. At postoperative 12th hour, the patient had still motor and sensory block. Neurological assessments at 24th and 36th hours revealed complete anaesthesia of the hand and forearm (C6-8), total paralysis of wrist (C6-7), marked weakness of biceps (C5-6), triceps (C7-8) and altered sensation in upper arm (C5-6, T1). Nerve conduction study was planned but nerve palsy begun to improve and complete recovery occurred in 43 hours.

Results: The causes of prolonged block are usually due to excessive use of local anaesthetics (LA) with epinephrine or nerve palsy developed by direct trauma, stretching and perineural edema. However, here, it was difficult to explain the cause because the amount of LA was within normal ranges without any vasoconstrictor. Absence of pain during injection excluded nerve injury.

Conclusions: The prolonged block might be caused by decrease of the nerve conduction velocity in older patients combined with nerve block.

ESRA Abstracts
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ESRA-0110
E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

ANAESTHETIC CHALLENGES IN THE MANAGEMENT OF PATIENTS WITH CHARCOT–MARIE-TOOTH DISEASE: A CASE REPORT

Shetty D.1, Shashidhara M.K.2 1MMed Regional anaesthesia- Stepping Hill Hospital- WWI, NHS Trust & Edge Hill University, Anaesthetics, Stockport, United Kingdom, 2SAs Stepping Hill Hospital- Senior Honorary lecturer in Anaesthesiology, Stockport, United Kingdom.

Background and Aims: Patients with pre-existing progressive peripheral nervous system disorders, often puts the anaesthesiologist in a dilemmatic situation especially when considering regional anaesthesia for the surgical procedure. Charcot-Marie-Tooth Disease (CMTD) is the most common inherited disorder of the peripheral nervous system and one of the most common genetic diseases in humans with an estimated frequency of 1 in 2,500 which is often referred to as hereditary motor and sensory neuropathies. We report anaesthetic management of a case of CMTD Type-2 patient posted for osteotomy of Left calcaneum.

Methods: A 44-year old female patient with prolonged history of foot and ankle pain predominantly affecting her left foot with decreased mobility essentially due to pain, was posted for left calcaneal osteotomy. Preoperative evaluation revealed that she was a diagnosed case of CMTD Type-2 without any other co-morbidities, good exercise tolerance and no previous surgeries in the past. Patient was explained about total intravenous anaesthesia (TIVA) for the procedure with the possibility of popliteal block for postoperative analgesia. However, a decision was made against the block after discussion with the surgeon and patient was managed with intravenous opioids in the recovery.

Results: Patient was stable postoperatively and had satisfactory pain relief with opioids. Theoretical risk of worsening of neurological symptoms weighed heavier than analgesic benefit of the block in this case.

Conclusions: Utility of regional anaesthesia in patients with pre-existing neurological disorders is a controversial topic as there isn’t enough evidence to support it. More research is required in this direction to widen scope of regional anaesthesia.

ESRA-0409
E-POSTER VIEWING

DIFFERENT PRACTICES AT MOORFIELDS EYE HOSPITAL

SUBTENONS ANAESTHESIA: A SERVICE EVALUATION OF DIFFERENT PRACTICES AT MOORFIELDS EYE HOSPITAL

Shukla B., Allen M. Moorfields Eye Hospital, Anaesthetics, London, United Kingdom.

Background and Aims: Sub tenons blocks continues to remain the most frequently performed regional orbital block since its introduction, resulting in fewer complications compared to sharp needle blocks. Subtenons injections performed using a subtenons cannula, can cause discomfort and potential for bleeding. Intravenous cannulation techniques have been described previously but reports of globe perforation have been reported. A modification of this technique used by some practitioners involves substituting the subtenons cannula for an intravenous cannula sheath.

This survey aims to compare 2 different established techniques for subtenons injections within our trust and compare their relative effects, including pain on injection.

Methods: A prospective data collection was conducted at Moorfields Eye hospital. Consultant anaesthetists were informed to perform their blocks in their normal routine and technique. Data was collected on:

- general details (demography, operation, sedation, antiplatelets/anticoagulation)
- drugs (dose, volume, additives)
- degree of haemorrhage and chemosis (indicated on a chart)
- pain/discomfort and what actions were taken

Results: The demographics and sedation requirements were similar between the STB and IVC group.

There were great variations in local anaesthetic composition and mixtures (Figure 1) and average speed of injection (Figure 2).

Chemosis and haemorrhage was increased in the IVC group (Figure 3) with average speed of injection. When comparing individual mixture there was no significant difference in the IVC group.

Conclusions: A prospective study to compare different intravenous cannula techniques for subtenons anaesthesia is needed to evaluate if this method is safe for subtenons injection.

Figure 1: Comparing the average composition of local anaesthetic mixtures used.

Figure 2: Comparing the average speed of injection on average for each technique and for each procedure for comparison.
Conclusions: The survey has demonstrated variations in clinical practice. The results suggest that IVC may cause less pain on injection and intraoperatively but may also cause increased chemosis and haemorrhage.

ESRA8-0249
E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

DETERMINATION OF ANALGESIC EFFICACY OF ULTRASOUND-GUIDED TRANSVERSUS ABDOMINIS PLANE BLOCK WITH LEVOBUPIVACAINE IN LAPAROSCOPIC TOTAL EXTRAPERITONEAL REPAIR OF HERNIA SURGERIES

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Background and Aims: Laparoscopic TEP repair surgeries are less painful, but the port access, tissue dissection and gas insufflation lead to pain. Bilateral TAP block in such cases may be beneficial. Our aim is to determine the efficacy of TAP block with levobupivacaine in these cases.

Methods: After obtaining Institute Ethics Committee approval and consent, 60 patients of ASA I-II aged between 18 to 80 years planned for laparoscopic total extraperitoneal (TEP) repair of unilateral hernia under general anesthesia were randomized into two groups. Group TAP – after institution of general anesthesia, before start of surgery, received bilateral ultrasound-guided transversus abdominis plane block with levobupivacaine 0.25% 0.3ml/kg on each side and the control group did not receive any block. The time taken to first rescue analgesic and the VAS score at that time point were noted when injection tramadol 50mg intravenous was administered and followed by 50mg intramuscular sos for 24 hours from extubation time and 24hour analgesic requirement was noted in mg/kg. VAS at rest and on cough were noted at 2, 4, 6, 12 and 24 hours post-operatively. Results were analysed using SPSS 19.0 software and p<0.05 was considered significant.

Results:

Time to first recue analgesic was significantly longer in the TAP Group (p=0.015) with lower VAS scores at time points 24 hours (p=0.018) and 12 hours (p=0.004). Postoperative nausea and vomiting was significantly less in TAP Group (p<0.001).

Conclusions: TAP block with levobupivacaine is a simple and useful method of analgesia for laparoscopic TEP hernia surgeries with fewer side effects.

TABLE 1.

<table>
<thead>
<tr>
<th>Group</th>
<th>Analgesia Duration (h)</th>
<th>VAS at Rest (mm)</th>
<th>VAS at Cough (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAP</td>
<td>&gt;12</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Control</td>
<td>&lt;12</td>
<td>&gt;0.05</td>
<td>&gt;0.05</td>
</tr>
</tbody>
</table>

*p=0.05 significant.

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Background and Aims: Interscalene brachial plexus block (ISBPB) is widely used in patients undergoing shoulder arthroscopy for postoperative analgesia. Epinephrine is also known to prolong the block duration when combined with 1% mepivacaine in infraclavicular BPB. This study aims to evaluate the efficacy of 1mcg/ml of epinephrine added to reduced amount of ropivacaine in ISBPB on postoperative analgesic effect in patients undergoing shoulder arthroscopy.

Methods: A randomized controlled study was conducted in 43 patients undergoing shoulder arthroscopy under ISBPB and general anesthesia. The patients were allocated into two groups; Group 1 (n=21, 10ml of 0.5 % ropivacaine + epinephrine 5 mcg/ml) and Group 2 (n=22, 20ml of 0.5 % ropivacaine + epinephrine 5 mcg/ml). Onset time of sensory block, duration of sensory and motor block, consumption of opioid via intravenous PCA and rescue analgesics in the first 24 hours following surgery were recorded.

Results: Onset of the sensory block was not significantly different between the groups (P=0.41). Sensory and motor block duration were comparable in both groups (sensory: P=0.858, motor: P=0.639, respectively). There were no significant differences in consumption of opioid via IV PCA and cumulative amount of rescue analgesics within 24 h following surgery (rescue analgesics: 8 h, P=0.329; 12 h, P=0.396; 24 h, P=0.381, respectively). No participants experienced any adverse effect.

Table 1. Duration of sensory and motor blockade

<table>
<thead>
<tr>
<th>Block duration (min)</th>
<th>Sensory</th>
<th>Motor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1 (n=21)</td>
<td>525.95 ± 128.44</td>
<td>462.86 ± 146.96</td>
</tr>
<tr>
<td>Group 2 (n=22)</td>
<td>532.86 ± 122.81</td>
<td>442.41 ± 136.39</td>
</tr>
<tr>
<td>p value</td>
<td>0.858</td>
<td>0.639</td>
</tr>
</tbody>
</table>

Values are expressed as mean ± SD.

Group 1: 0.5 % ropivacaine 10 ml + epinephrine 5 mcg/ml
Group 2: 0.5 % ropivacaine 20 ml + epinephrine 5 mcg/ml

Conclusions: This study demonstrated that perineural administration of epinephrine, when combined with reduced dose of ropivacaine equally provided the adequate postoperative analgesic effect by showing no statistical difference in sensory and motor block duration after ISBPB without any adverse side effect.

ESRAB-0044
E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

SYMPATHETIC OVERACTIVITY DUE TO LOCAL ANAESTHETIC SYSTEMIC TOXICITY

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Background and Aims: Local anaesthetic systemic toxicity (LAST) typically appears 1-5 minutes after injection. Initial manifestations vary widely. Classically, patients experience symptoms of central nervous system (CNS) excitation due to inhibition of inhibitory pathways. Soon CNS depression ensues.

To present a case of LAST in a patient after a shoulder arthroscopy (SA).

Methods: A 47-year-old female, diabetic, with good glycaemic control, ASA II, was scheduled for SA. General anaesthesia (GA) was administered, using midazolam for premedication, followed by propofol, fentanyl and rocuronium for induction and tracheal intubation. GA was maintained with desflurane and remifentanil infusion. The operation was uneventful and the patient after an uncomplicated recovery was transferred to the PACU.

The patient received paracetamol and pethidine and an interscalene brachial plexus block using a nerve stimulator was performed for postoperative analgesia. 15mg ropivacaine 0.5% were administered, using all safety measures (incremental injection / careful aspiration) to avoid intravascular administration.

Results: 6 minutes later the patient was slightly confused and her blood pressure and heart rate progressively increased to 220/120 mmHg and 160 bpm respectively. Immediately midazolam, clonidine 150 μg and esmolol infusion were used. Progressively haemodynamic status returned to normal and the patient returned to the ward after 60 min monitoring in the PACU.

Conclusions: LAST may appear even when all safety measures are taken and doses kept minimum. Classical CNS symptoms as oral numbness, light-headedness or seizures may be absent and sympathetic overactivity due to inhibition of inhibitory pathways of the sympathetic nervous system may be the cardinal clinical feature.

ESRAB-0360
E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

PROSPECTIVE STUDY OF PATIENTS’ PREFERENCES FOR THEIR BLOCK INSERTION

Spiteri C., Mould M., Galitzine S., Athanassoglou V., Marfin A., Matthews J. Oxford University Hospitals, Nuffield Department of Anaesthetics, Oxford, United Kingdom.

Background and Aims: There is little evidence to suggest that performing peripheral nerve blocks (PNBs) under general anaesthesia (GA) is harmful. Sedation increases patient’s acceptance of PNBs, however there is little literature specifically exploring patient preference for PNBs when awake.

Methods: Appropriate orthopaedic cases that required a combination of GA and PNBs were identified at our tertiary referral institution and included in this prospective audit of patients’ preferences. After informed consent for PNBs, patients were asked their preference (asleep, awake or no preference) and a brief explanation for their choice.

Results: Out of 100 patients, 67 (67%) preferred to be asleep, 25 (25%) had no preference, and 8 (8%) preferred to be awake. Of 67 patients preferring asleep PNB, 12 wanted to be unaware of a procedure, 13 had needle phobia, 11 had general anxiety, 14 for convenience, 6 were afraid of pain and 11 had various other responses.

Conclusions: Our study suggests that the majority of our patient population prefers to be asleep for PNBs. Patient anxiety and inclination for reduced procedure awareness seems to be important. In view that there is little evidence that performing PNBs under GA is associated with more complications, clinicians should concentrate on patient-centered care when offering PNBs.
A total of 239 patients had MLA. Of these, 116 patients received PNB for MLA.

### Methods

**Background and Aims:** Patients undergoing major lower limb amputation (MLA) who are of higher ASA classification face higher risks. Regional anesthesia is frequently the technique of choice for these patients. This study aims to review the choice of anesthetic techniques and complications for patients undergoing MLA in our institution from 2014 to 2017.

**Methods:** The Institutional Review Board’s approval was obtained for this retrospective survey. The study team reviewed 239 electronic anesthetic records in our institution for patients undergoing MLA from 2014 to 2017. The primary outcome for this study was the success rate of peripheral nerve blocks (PNB) and postoperative outcome of 30-days, 90-days and 1-year mortality for these patients.

### Results

- **Type of anaesthetic:**
  - PNB: n = 116 (48.5%)
  - CNB: n = 70 (29.2%)
  - GA: n = 53 (22.3%)

- **Type of surgery:**
  - ASA: 40 (34.5%)
  - BKA: 76 (65.5%)

- **ASA class:**
  - ASA 1-2: 12 (10.3%)
  - ASA 3: 97 (81.6%)
  - ASA 4/5: 10 (15.3%)

- **Conversion to GA:**
  - PNB: n = 13 (11.2%)
  - CNB: n = 1 (0.8%)
  - N/A

- **30-day Mortality:**
  - PNB: n = 16 (18.9%)
  - CNB: n = 4 (5.7%)
  - GA: n = 5 (5.3%)

- **90-day mortality:**
  - PNB: n = 24 (20.7%)
  - CNB: n = 8 (11.4%)
  - GA: n = 6 (6.5%)

- **1-year mortality:**
  - PNB: n = 30 (26.3%)
  - CNB: n = 12 (37.1%)
  - GA: n = 12 (37.1%)

### Conclusions

- Compared with other anaesthetic techniques, PNB for MLA came with a high success rate in our institution. The higher mortality rate in PNB group is likely confounded by having sicker patients (higher ASA score) in the PNB group.

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**Figure 1:**

A flowchart showing the number of cases of AKA/BKA and the 1 year mortality, according to anesthetic technique.
new regional approaches. A survey was conducted to unveil shifts of “golden standard” techniques to other peripheral nerve blocks.

**Methods:** Together with the Belgian Association of Regional Anesthesia (BARA), two surveys were conducted (February to August 2017). One was sent to members of the BARA mailing list and questioned regional techniques for surgery. Another was sent to responders of the first survey to identify their post-operative pain management 5-10 years ago. Both surveys consisted out of a web-based questionnaire.

**Results:** We received 220 and 136 answers, representing a 9.6% and 61.8% response rate. Among responders, the interscalene block remains the golden standard for shoulder surgery. The supraclavicular block gains interest for elbow and distal upper limb surgery, while there is a decrease in use of the axillary nerve block. Transversus abdominis plane blocks are considerably more used in laparoscopic abdominal surgery than 5-10 years ago. For hip surgery, the fascia iliaca compartment block is more frequently used than the femoral nerve block. Beside the frequently used femoral nerve block, the adductor canal block and iliac compartment block is more frequently used than the femoral nerve block.

**Conclusions:** The aim of this survey was to determine the most up-to-date peripheral nerve block technique in correlation with the surgical procedure. Prominent trends cannot be neglected.

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**ESRA-0430**

**E-POSTER VIEWING**

**PERIPHERAL NERVE BLOCKS**

**ROLE OF ANKLE BLOCK IN THE FOOT SURGERY**

Vito G.1, Alessandra G.1, Barbara E.1, Di spigno N.1, Chiara M.2, Di Palma G.2, Corbisciero M.1, 1CIC Humanitas Mater Domini, Anesthesia-ICU, Castellanza, Italy; 2Insubria University, Varese, Italy.

**Background and Aims:** We want evaluate the efficacy of ankle block in foot’s surgery. Patients walk soon after surgery time and we have evaluated pain at rest and on movement.

**Methods:** Still we have considered the adverse events: nausea, vomiting, hematoma in site of block, prolonged motor block, nerve injury, local anesthetics toxicity, local infections.

**Results:** We enrolled 212 patients, ASA I-III. We measured onset/offset time of block, pre-, intra-, and post-operative hemodynamic parameters (heart rate and blood pressure), total operation duration, the degree of sedation, post-operative pain severity throughVAS at 6-12-24 h and 1 month after operation, the need for rescue analgesia and any complications/side effects.

**Conclusion:** Ankle block was effective for percutaneous surgery of foot and for the management of pain post-operative and the adverse events were limited. Also the ankle block allows easy deambulation of patients. In conclusion the ankle block we considered an optimal technique in consideration of the best patient outcome.

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**ESRA-0399**

**E-POSTER VIEWING**

**PERIPHERAL NERVE BLOCKS**

**SERRATUS ANTERIOR PLANE BLOCKS FOR PAIN CONTROL IN ANTICOAGULATED PATIENTS WITH TRAUMATIC RIB FRACTURES: A CASE SERIES.**

Watts A.J., Tong D. King's College Hospital, Anaesthetics Department, London, United Kingdom.

**Background and Aims:** Blanco et al first describe Serratus Anterior Plane (SAP) block for use in breast surgery. Since, benefits in traumatic rib fractures as part of multimodal analgesic approach have been described. There is an assumed benefit for anti-coagulated patients when epidural is contraindicated.

**Methods:** Five cases described are identified without procedural complications of haematoma or haemothorax. Cases include: 19 male with ruptured kidney and rib fractures, on anti-coagulation post renal artery embolectomy; 24 male with rib fractures leading to hyperventilation, post traumatic cardiac arrest, on IV Heparin for large pulmonary embolus; 84 female with rib fractures post car accident on warfarin for atrial fibrillation.

**Conclusions:** AAGBI describes facial blocks with a relative risk in anti-coagulated patients at the lower end of the scale and addendum stating Ultrasound guidance in expert hands reduces risk of vasculature puncture, hence may be safe in altered coagulation. These cases confirm benefits that outweigh a risk which can be alleviated through confirmation of vasculature absence using colour Doppler.

We ran a quality improvement project to provide 24 hour access to SAP blocks and continuous infusions to benefit all traumatic rib fracture patients.

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**ESRA-0319**

**E-POSTER VIEWING**

**PERIPHERAL NERVE BLOCKS**

**KNOWLEDGE OF AXILLARY BRACHIAL PLEXUS SONOANATOMY AMONGST ANAESTHETISTS**

Woodham V., Durasamy K., Pawa A. Guy's and St Thomas' Hospital, Anaesthetics, London, United Kingdom.

**Background and Aims:** Ultrasound-guided regional anaesthesia is rapidly becoming standard practice, but its successful use is highly operator dependent. Development of adequate skills is reliant upon various competencies, including correct image acquisition and interpretation. The axillary brachial plexus block is considered a basic, low difficulty block. As a superficial block with a low risk of complications, it is ideal for beginners; multiple needle adjustments maximise opportunity for needling practice. Anaesthetists of all stages should therefore have thorough knowledge of sonoanatomy of the upper limb.

**Methods:** 20 anaesthetists of all grades were randomly selected to identify components of the axillary brachial plexus on a live model. They were given no more than 5 minutes scanning time and asked to identify nine key neurovascular and muscular anatomical structures.

**Results:** All participants were able to identify the axillary artery and vein. However, only 45% were able to successfully identify the median and radial nerves, with 40% correctly identifying the ulnar nerve. The musculocutaneous nerve was the most commonly identified structure (75%), whilst the coracobrachialis muscle was the least (54%). Speciality trainees (ST4-ST7) performed best, obtaining 78% of correct responses, followed by Consultants (60%). Core Trainees had the fewest correct responses (49%).

**Conclusions:** Despite the axillary brachial plexus block being simple and commonly performed, we identified a knowledge deficit around ultrasound anatomy at all grades. This could lead to increased risk of patient harm with decreased success and reliability of blocks. This highlights the need for further education and increased frequency of formal teaching opportunities at all levels.
ESRA8-0390
E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

‘STOP BEFORE YOU BLOCK’ RE-AUDIT OF PRACTICE IN A LONDON TEACHING HOSPITAL

Woodham V., Duraisamy K., Pawa A. Guy’s and St Thomas’ Hospital, Anaesthetics, London, United Kingdom.

Background and Aims: The Stop Before You Block (SBYB) campaign was started in 2011 after 67 incidences of wrong-sided blocks in the UK over a 15-month period. This constitutes a Never Event according to the National Patient Safety Agency and exposes patients to increased risk of nerve injury, local anaesthetic toxicity and wrong-site surgery. Despite a visible campaign in our hospital, there were two wrong-sided blocks in the last two years. The aim of the audit was to assess departmental compliance with SBYB and measure performance against previous results.

Methods: Data was collected prospectively by nursing staff on regional nerve blocks performed over a 3-month period. Data collected included grade of anaesthetist, type of block and whether steps in SBYB were adhered to. This was compared to data collected in 2016.

Results: Data was collected for 100 regional nerve blocks. In 76% (vs 93% in 2016) of cases the operative side was confirmed with the patient and consent form prior to the procedure and in 87% (vs 83%) of cases the anaesthetist visualised and exposed the surgical mark prior to prepping the area. However, only 57% (vs 55%) of anaesthetists paused prior to needle insertion.

Conclusions: Despite recent wrong-sided blocks and frequent audit, no new interventions have been introduced and there has been no significant improvement in compliance since the last audit. More needs to be done in order to reduce the risk of preventable patient harm. This may require an alternative approach i.e. Mock Before You Block or devoting further resources to the current campaign.

ESRA8-0115
E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS

ULTRASOUND-GUIDED ANTERIOR PSOAS COMPARTMENT BLOCK IN SUPINE POSITION

Xu T., Jiang W. Shanghai 6th People’s Hospital- Shanghai Jiao Tong University, Department of Anesthesiology, Shanghai, China.

Background and Aims: Psoas compartment block often need to be performed in lateral decubitus position or seated prone. The psoas muscle is in front of the iliac muscle at L5 level. It is possible to perform a psoas compartment block with an anterior-to-posterior trans-iliac muscle approach in the supine position.

Methods: A 2-5 MHz curved array probe is placed at lower and interior of anterior superior iliac spine to perform a transverse section scan (figure 1 and 2). Figure 3 shows the short axis of the ilium (I), the iliac muscle (IM), the psoas muscle (PM), the lumbosacral trunk (LST), and the sacrum (S). The lateral femoral cutaneous nerve, femoral nerve and obturator nerve pass or descend through the posterior portion of the psoas muscle; The lumbosacral trunk is located medial to the psoas muscle.

Results: Block of the femoral nerve and obturator nerve could be satisfied performed in lateral decubitus position or seated prone. The psoas muscle is in front of the iliac muscle at L5 level. It is possible to perform a psoas compartment block with an anterior-to-posterior trans-iliac muscle approach in the supine position.

Conclusions: This technique reduces postural change-induced pain especially in elderly patients. And, it also reduces the risk of intrathecal injection and potential injuries of kidney or bowel. The shortage of this technique is that the needle-inserted plane is lower than previous methods and the lateral femoral cutaneous nerve sometimes couldn’t get satisfied block. It may need relatively large capacity of local anesthetics and long time to get a well block of target nerves.
ESRA Abstracts
Regional Anesthesia and Pain Medicine • Volume 43, Number 7, Supplement 1, October 2018

ESRA8-0224
E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS
AXILLARY GIANT LIPOMA EXCISION UNDER SERRATUS PLANE BLOCK
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Background and Aims: Serratus plane block (SPB) achieves complete analgesia of the hemithorax and axillary region. This block was generally used for acute postoperative pain management and reducing postoperative opioid consumption, neuropathic and chronic pain, however the use of surgical anesthesia is limited. We report successful case of giant lipoma excision on axillary region with SPB for perioperative anesthesia and analgesia. A written consent form was obtained from the patients.

Methods: Eighteen-year-old male patient had a giant lipoma (23x10x5cm) in the axillary region. Patient did not want general anesthesia and local anesthesia could not be performed because the lipoma was deeply localized. The patient was taken to the regional anesthesia room and given lateral decubitus position. SPB was performed at the level of 4th and 5th ribs on the posterior-axillary line with 15 mL 0.5 % bupivacaine and 15 mL 2 % lidocaine. The sensory examination was performed with the pinprick test. Anesthesia was provided to the thoracic wall from Th2 to Th8 and axillary region.

Results: Duration of the surgery was 60 minutes, and the patient did not require additional opioids and sedatives.

Conclusions: SPB was developed as an alternative to central blocks primarily for analgesia after surgery on the hemithorax and it is provide anesthesia for breast, thoracic wall and axillary. SPB does not only provide analgesia, but also surgical anesthesia in lesions that are not related to the thoracic wall, like lipomas. SPB may be an alternative to general anesthesia, especially in high-risk patients.

FIGURE 1.

ESRA8-0134
E-POSTER VIEWING

PERIPHERAL NERVE BLOCKS
REDUCTION OF LOCAL ANESTHETIC VOLUME WITH EXPERIENCE IN YEARS IN ULTRASOUND GUIDED INFRACLAVICULAR BRACHIAL PLEXUS BLOCK
Yeniacak T., Canbolat N. Balatlimani Metin Sabanci Bone and Joint Diseases Education and Research Hospital Istanbul, Anesthesiology, Istanbul, Turkey.

Background and Aims: Infracravicular brachial plexus block (ICB) is commonly used in upper extremity surgeries with ultrasonography guidance (USG). In recent years the use of ultrasonography improved the application of peripheral nerve block with easily monitoring the distribution of injected local anesthetic (LA) by detecting nerve localization, visualization of vascular structures and pleural border, visually controlling the needle tip, and dissemination of the injected LA aimed to share our experiences of USGICB for upper extremity surgeries and decreasing LA volume as physicians experience increased in years.

Methods: With approval from the ethics committee; age, gender, height, weight, operation type, ASA score, LA dose, complications, and block success rate of USGICB anesthesia records were examined between November 2011 and March 2015. Forty months were divided in 4 groups chronologically. The anesthesiologists who applied the blocks were 9 people who had the same education and had equal experience of USGICB. From the point of inexperienced period LA dose and success rate, failure, and complications were recorded.

Results: In this study, 2953 patients underwent USGICB. In first 10 months process 628, second 10 months 671, third 10 months 719, and last 10 months 932 cases were detected. Although the LA volume applied as the physician experience increased over the years was not statistically significant, a reduction of volume use over 30 ml was observed in Groups II, III and IV compared to the Group I. In group I failure rate was higher than group II-III-IV (p < 0.05). The failure rates of Group II-III-IV did not differ significantly.

Results are shown in Table 1 and Figure 1.

FIGURE 1.

TABLE 1.

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean (±SD)</th>
<th>Max</th>
<th>%</th>
<th>Med</th>
<th>Max</th>
<th>%</th>
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<tr>
<td>I</td>
<td>38 ± 4±5</td>
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<td>35</td>
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<tr>
<td>II</td>
<td>35 ± 3±6</td>
<td>45</td>
<td>90</td>
<td>30</td>
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<td>90</td>
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<tr>
<td>III</td>
<td>30 ± 2±7</td>
<td>40</td>
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</tr>
<tr>
<td>IV</td>
<td>25 ± 1±8</td>
<td>35</td>
<td>90</td>
<td>20</td>
<td>35</td>
<td>90</td>
</tr>
</tbody>
</table>

Results: Duration of the surgery was 60 minutes, and the patient did not require additional opioids and sedatives.

Conclusions: SPB was developed as an alternative to central blocks primarily for analgesia after surgery on the hemithorax and it is provide anesthesia for breast, thoracic wall and axillary. SPB does not only provide analgesia, but also surgical anesthesia in lesions that are not related to the thoracic wall, like lipomas. SPB may be an alternative to general anesthesia, especially in high-risk patients.
Results: Eight patients were presented for immediate fasciotomy due to upper limb ACS based two distal radius fractures, two deep tissue infection, three multiple metacarp fractures and one crush injury. None of them was postoperative ACS. Single shot USGICB was performed with a mix of 10 ml of %0.25 bupivacaine and 10 ml of %1 lidocaine. Fasciotomy was performed without any complications. Perioperatively no other analgesia was administered. The patients needed the first analgesia provided by USGICB technique would mask the symptom of ACS and consequently delay the diagnosis of ACS remains a controversial issue. USGICB with low dose LA can be applied to prevent masking ACS. LA can be applied to prevent masking ACS.

Conclusions: The confirmation of the hyperechoic flash within the TPVS does not guarantee a wider distribution of the CTPVB.

ESRA ESTER VIEWING

PERIPHERAL NERVE BLOCKS

INFRACLAVICULAR BRACHIAL PLEXUS BLOCK FOR ACUTE COMPARTMENT SYNDROME

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Background and Aims: Acute compartment syndrome (ACS) is an orthopedic emergency. Increased fascial compartment pressure can compromise circulation and function of tissues, may lead to irreversible neuromuscular ischemic damage in four to six hours after the symptoms emerge. The aim of the study is to report our experience in eight ACS cases.

Methods: We observed eight ACS cases that were performed with ultrasound guided infracavicular brachial plexus block (USGICB) with diluted local anesthetic (LA) dose.

Results: Eight patients were presented for immediate fasciotomy due to hyperemic flash within the thoracic paravertebral space (TPVS) induced by air injection through the catheter. We tested the hypothesis that a CTPVB would produce the catheter whose position was confirmed using our method would provide a wider spread of sensory block.

Methods: The Institutional Review Board approved this study. Before commencement of thoracoscopic surgery, a Tuohy needle was introduced into the lateral edge of the TPVS, in a lateral-to-medial direction, under ultrasound guidance, and a catheter threaded 4.5 cm beyond the needle tip. Immediately after surgery, 1-ml air was injected through the catheter while observing a sagittal view of the TPVS. Patients were divided into two groups based on the presence (P group, n = 12) or absence (A group, n = 8) of the hyperemic flash. Subsequently, 10-ml radiopaque dye was injected via the catheter to evaluate its distribution. Then, a CTPVB using 0.25% levobupivacaine (8 ml/h) was initiated. The primary outcome was the number of anesthetized dermatomes 24 hours after surgery.

Results: The radiopaque dye reached significantly more segments in the P group. However, the median (IQR) number of anesthetized dermatomes 24 hours after surgery in the P group and the A group was 3.5 (3–4) and 3 (1.5–4.75), respectively (p = 0.70).

Conclusions: The confirmation of the hyperechoic flash within the TPVS does not guarantee a wider distribution of the CTPVB.

ESRA ESTER VIEWING

PERIPHERAL NERVE BLOCKS

THE APPLICATION OF A INTERSCALENE BLOCK IN A POLYTRAUMATIZED PATIENT WITH A HUMERUS FRACTURE AS ANESTHESIA CHOICE: A CASE REPORT

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Background and Aims: Most surgical procedures on patients suffering from polytraumatic injuries are performed under general anesthesia: patients with multiple bone fractures and internal organ injuries are at high risk for developing subsequent systemic disorders. Here we show a case of an American Society of Anesthesiologists classification (ASA) III patient, scheduled for reposition and osteosynthesis of the humerus. Due to a high risk for general anesthesia, we decided to apply interscalene block with intravenous sedation.

Methods: A 41-year-old female, ASA III patient, was scheduled for reposition and osteosynthesis of her right humerus. During her fall, the patient sustained polytrauma injuries: right sided pneumothorax with bilateral lung contusions, body fractures of the cervical (C)5 and (C)6 vertebrae, fractures of the thoracic (Th)4, Th5, Th8, Th11 and lumbar (L)1, L2 and L3 vertebrae with previously performed stabilization and spongioplasty. Due to a high risk for general anesthesia, we decided to apply interscalene block with intravenous sedation.

Results: The application of ultrasound and nerve stimulator in interscalene block, enabled us to achieve high precision. Such administration of
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ESRA-0401
E-POSTER VIEWING

OBSTETRIC
UNDERSTANDING TECHNICAL DIFFICULTIES IN LABOUR EPIDURAL ANALGESIA: RETROSPECTIVE COHORT STUDY OF DOCUMENTED PROCEDURAL DIFFICULTIES AMONG VARIOUS NATIONALITIES AND ETHNICITIES
Balakrishnan A., Chin R., Arora D. National University Hospital, Anaesthesiology, Singapore, Singapore.

Background and Aims: Labour analgesia is offered and administered for 80% of the obstetric patients at National University Hospital Singapore. The hospital incidence of complication such as post dural puncture headache range from 0.1 to 4.5%. This retrospective study was conducted to explore the existing problems with labour epidurals at our hospital

Methods: A retrospective cohort study of labour epidural services was conducted. Data were collected after domain specific IRB clearance from scanned labour epidural forms from in-hospital electronic medical records for the months of December 2017 until March 2018.

Results: Total of 609 patients had received labour epidural analgesia over the 4 month period.

The major ethnicities and nationalities included Chinese (45%), Malay (20%), and Indian (17.9%). The rest were Caucasians and other nationalities.

BMI ranged from 16.4 to 54.7 with 29% normal, 40.9% overweight and 26.3% obese and 2.9% in the super obese category with a mean depth to epidural space from skin was 3.3 cm, 4.3 cm, 4.8 cm, 5.3 cm and 6.5 cm in increasing order of BMI.

Caucasians had the lowest skin to depth space irrespective of the BMI with least number of complications such as parasthesias, breakthrough pain with 92% of them having an epidural in 1 attempt.

Expatriate nationalities had epidural depth 0.5-0.8 cm lesser in each category of BMI compared to national population (correlation coefficient 0.05).

Ultrasound guidance (USG) was used only in 4.5% of the labour analgesia procedures.

Conclusions: Nationalities and ethnicities vary in anatomy, epidural depth, and incidence of complications.

Allocating expert supervision and USG usage should be decided by considering ethnicities and nationalities, and not only BMI.

ESRA-0408
E-POSTER VIEWING

OBSTETRIC
A LATE PRESENTATION OF ACUTE FATTY LIVER OF PREGNANCY RESULTING IN MASSIVE OBSTETRIC HAEMORRHAGE DURING TWIN DELIVERY MANAGED WITH EPIDURAL ANALGESIA
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Background and Aims: Acute fatty liver of pregnancy (AFLP) is a life-threatening condition with an incidence of 1:20,000. We report an unusual case of AFLP which presented without symptoms, diagnosed late in the second stage of labour.

Methods: A 34-year-old primigravida with twins pregnancy admitted for induction of labour had an epidural sited 18 hours after admission for analgesia. After unremarkable 8 hours, she became oliguric with low platelets, elevated INR, deranged renal function and elevated liver enzymes. An initial diagnosis of HELLP syndrome was made and managed accordingly. Serum glucose was subsequently found to be 2.6mmol/L and blood pressure was normal, a revised diagnosis of AFLP was made. As the patient was in second stage, a forceps delivery in theatre was done under epidural top-up. Coagulopathy was aggressively corrected with fibrinogen, FFP and cryoprecipitate before delivery. Despite this, patient had massive obstetric haemorrhage of 3L in the theatre. Following transfer to ICU, liver dysfunction worsened but with aggressive supportive management, her condition improved. Contrast CT was performed which showed evidence of liver failure. The patient improved with conservative management and the epidural was removed later under platelet cover.

Results: AFLP is a rare disorder or pregnancy caused by impaired long chain fatty acid metabolism, which can progress rapidly to liver and renal failure. This patient was asymptomatic with biochemical changes mimicked HELLP syndrome. Early intensive care management improves outcomes.

Conclusions: Anaesthetic considerations include risk of regional block with coagulopathy balanced against complications of GA in the presence of encephalopathy and liver failure.

ESRA-0055
E-POSTER VIEWING

OBSTETRIC
COMBINED SPINAL-EPIDURAL AND LOCAL ANESTHETIC INFILTRATION FOR CESAREAN DELIVERY IN A PATIENT WITH MYOTONIC DYSTROPHY AND SEVERE CARDIOPULMONARY COMPROMISE
Cai Y.1, Scott C.1, Anwar A.2, James P.3, Warrick A.3, Vanderhoef K.2, Diachun C.2 1Mayo Clinic, Anesthesiology, Jacksonville, FL, USA, 2UP Health Jacksonville, Anesthesiology, Jacksonville, FL, USA.

Background and Aims: Myotonic dystrophy (MD) is a rare disorder characterized by progressive myopathy and myotonia. Systemic complications may include cardiomyopathy and difficulty weaning from mechanical ventilation (MV). Discussion of obstetrical cases in the context of these comorbidities are sparse, and to our knowledge, this is the first case of regional anesthesia for full-term delivery in a parturient with MD and concomitant cardiopulmonary compromise.

Methods: Case report.

Results: A 27-year-old G3P0020 at 35w2d with MD and a history of prolonged tracheostomy was admitted for progressive hypoxia requiring supplemental oxygen at 25 weeks gestation. Hospital workup revealed periodic episodes of non-sustained ventricular tachycardia and severe right ventricular enlargement with septal wall flattening during both systole and diastole. Caesarean section was scheduled for 36w2d. Prior to surgery, arterial line and defibrillation pads were placed. A combined spinal-epidural (CSE) was placed at L3-4 without intrathecal drug administration. Due to incomplete sensory deficit, local infiltration using lidocaine was used on skin and uterine incision regions. A viable male with APGAR scores of 3 at 1 minute and 7 at 5 minutes was delivered at 33 minutes after skin incision. Hemodynamic stability was maintained with intravenous epinephrine and vasopressin infusions, and spontaneous ventilation was preserved throughout.

Conclusions: Given the risk of prolonged MV, neuraxial anesthesia was critical to maintaining spontaneous respiration. Epidural or intrathecal opioid was avoided due to risk of apnea, and intrathecal anesthetic avoided due to sympathectomy. A CSE without intrathecal dosing may provide inadequate anesthesia and can be supplemented with local infiltration of lidocaine.
ESRA-0256
E-POSTER VIEWING
OBSTETRIC
INCIDENCE AND MANAGEMENT OF POST-DURAL HEADACHE AFTER EPIDURAL ANAESTHESIA: A REVIEW OF 2703 CASES IN A SINGLE CENTRE DURING TWO YEARS
Gasca Pera S.1, Pérez Poquet M.1, Cebrián Moreno A.1,2, Mestres González G.1,2, Marin Moya M.1, Margarit Estràgués N.1, Párraga Fernández N.2, Balsells Felter J.3,1 Hospital Universitari Mutua Terrassa, Anesthesiology, Terrassa, Spain, 2Hospital Universitari Mutua Terrassa,急性疼痛科护士, Terrassa, Spain.

Background and Aims: Post-dural puncture headache (PDPH) is the most frequent complication following accidental dural puncture (ADP) and is particularly frequent after epidural analgesia in obstetric patients in our hospital, as well as the efficacy of our PDPH protocol in clinical practice.

Methods: We included all obstetric patients (n=2703) who received epidural anaesthesia for labour in 2016 and 2017. Patients with reported ADP and those in whom ADP was not noticed but developed PDPH started postpartum standardized treatment for PDPH. It included conservative therapies such as bed rest, hydration, corticoids and analgesics. If headache continued after 48 hours, an epidural blood patch (EBP) was performed. Incidence of PDPH, number of patients who received EBP, the day in which EBP was made and the remission of headache were recorded.

Results: The incidence of reported obstetric ADP in our centre was 0.0115% (31/2703), 64.5% (20/31) of cases developed PDPH. EBP was performed in 65% (13/20) of women with persistent headache and was resolved in 12/13 (92.3%). One case needed a second EBP. The median until the EBP was performed was 4 days (range 3-6).

Conclusions: The incidence of PDPH after ADP in our centre is lower than the published average. The EBP is a useful technique for treatment in patients with unsuccessful conservative management of PDPH.

ESRA-0175
E-POSTER VIEWING
OBSTETRIC
THE ASSOCIATION BETWEEN MOTOR BLOCKADE AND DURATION OF SECOND STAGE LABOUR WITH LABOUR EPIDURAL ANALGESIA
Ithnin F.B.1, Tan D.J.A.2, Sultana R.3, Sia A.T.H.1, Sng B.L.1,2,4 KK Women’s and Children’s Hospital, Women’s Anaesthesia, Singapore, Singapore, 2Duke-NUS Medical School, MD Programme, Singapore, Singapore, 3Duke-NUS Medical School, Centre for Quantitative Medicine, Singapore, Singapore.

Background and Aims: Studies have suggested that epidural analgesia could prolong second stage labour due to resulting motor blockade. However, current literature is not conclusive as to which specific patient group is most affected by this detrimental consequence. Our primary aim was to determine the associations between motor blockade and second stage labour duration according to mode of delivery in parturients receiving labour epidural analgesia.

Methods: After institutional ethics approval, a retrospective cohort study was conducted involving 10,146 parturient records of labour epidural analgesia between January 2012 to December 2013 in KK Women’s and Children’s Hospital, Singapore. Parturients who delivered vaginally were categorised into 2 groups: (1) normal vaginal delivery (NVD) and (2) instrumental delivery. Motor blockade was categorised into: (1) no motor block and (2) any degree of motor blockade (defined as modified Bromage score 1 – 3). Zero-inflated Poisson regression model for second stage labour duration and logistic regression model for presence of motor blockade were used for data analysis.

Results: Parturients with instrumental delivery and motor blockade were more likely to have longer second stage labour (P=0.0027), unlike parturients with NVD. Parturients with NVD and motor blockade had higher incidence of post-procedure neural deficit (P=0.0011) 24 to 48 hours post-delivery, unlike parturients with instrumental delivery.

Conclusions: Parturients with instrumental deliveries had a positive association between receiving motor blockade and second stage of labour duration. Parturients with NVD had a positive association between receiving motor blockade and post-procedure neural deficit. Future research may be necessary to further investigate and validate these associations.

ESRA-0507
E-POSTER VIEWING
OBSTETRIC
CONTINUOUS SPINAL ANALGESIA IN TRIAL FOR LABOUR USING WILEY SPINAL
Grimaud O. Anaesthetist, Clinique Saint Michel, Toulon, France.

Background and Aims: The aim of the study was to evaluate the advantages and drawbacks of CSA in trial for labour using Wiley Spinal over the needle catheter.

Methods: Fifty-one parturient (ASA physical status I and II, diabetes, hypertension, tachyarrhythmia, previous C-section, and twin pregnancy), mean age of 28 years (range 20 - 40) were scheduled for labour trial. When regular contractions at a minimum 2 cm dilatation, a 23G catheter over a 27G pencil point spinal needle was introduced into the subarachnoid space through a peel-away cannula, at the L2-L3 interspace, and a first bolus of 3 mg ropivacaine with 2.5 μg sufentanil or 0.5 ml saline were administered on demand. We focused on success rate, onset of analgesia, mean consumption of drugs, and side effects (i.e., hypotension motor block headache).

Results:
• Onset of perfect analgesia: (VAS 0 in 80% of cases and 2 in 10patients): 5 to 10 minutes, at any dilatation.
• Mean duration of labour was 6 hours with a mean consumption of 2, 7 mg Ropivacaine and 1.8 μg Sufentanil hourly by spinal route.
• Perfect hemodynamic stability without motor block.
• 36 parturients (70%) delivered spontaneously; 10 cases (19.6%) had total comfort operative vaginal and 5 cases (9.8%) were successfully converted to Caesarean anesthesia.
• 2 parturients (3%), 40 and 38 years old had PDPH, requiring a blood patch.

Conclusions: CSA with Wiley Spinal is a satisfactory and safe technique for labour.

ESRA-0161
E-POSTER VIEWING
OBSTETRIC
AWARENESS AND EXPECTATIONS OF LABOUR ANALGESIA AMONG PARTURIENTS IN A TERTIARY CARE MATERNITY HOSPITAL IN QATAR
Khalid F., Naz A., Joseph G., Kurian B. Hamad Medical Corporation, Anaesthesiology, Doha, Qatar.

Background and Aims: Epidural analgesia is the gold standard for pain relief during labor. Women’s Hospital is a tertiary care maternity unit in Qatar with 16,000 to 18,000 deliveries per year, providing a 24 hour epidural service, with an epidural rate of 45%. The main aim of this survey was to study the awareness of, and, expectations from labor epidural analgesia amongst our multi-ethnic
and multi-lingual population. This would help us to further improve our antena
torial counselling services on labor analgesia
Methods: With ethical committee approval, we conducted a questionnaire
based survey among 100 patients in active labor, receiving labor epidural anal-
gesia for the first time.
Results: 71% of parturients were aware of the presence of epidural services. Only
38% had been counselled by clinicians, 5% had read an information leaflet an-
tenataly, and the rest had heard of the service from a friend/relative. Only 45%
were either aware of or offered other modalities of analgesia. Of the total re-
quests for epidural analgesia, 74% were triggered by patients, while the rest
were by the obstetricians. All parturients expected to be completely pain free,
with 57% believing this could be achieved within 5 minutes.
Conclusions: Our survey showed that our patients had somewhat unreal ex-
pectations from labor of epidural analgesia. Improving our low counselling rates
and the use of multi-lingual leaflets would help manage this, and enable our pa-
ients to make informed choices for labor analgesia.

ESRA8-0446
E-POSTER VIEWING
OBSTETRIC
AN UNUSUAL PRESENTATION OF DENSE UNILATERAL EPIURAL BLOCK AND SUBSEQUENT PRESENTATION OF TINNITUS AS THE POST DURAL PUNCTURE SYMPTOM
Ma S., O’Connor D., Dasan J. King’s College Hospital, Department of Obstetric Anaesthesia, London, United Kingdom.
Background and Aims: Case reports remain an important resource in clinical education. Unilateral or failures of epidurals are commonly encountered for var-ious reasons. We describe a previously unreported pattern of unilateral supra-
normal block.
Methods: Case
A 33-year-old G1P0, of 41+3 gestation presented with spontaneous la-
bour. An epidural was requested. After consent, 2 attempts at L3/4 were
made. Loss of resistance to saline was at 5.5cm with catheter passing unhin-
dered, leaving 4.5cm in situ following negative aspiration. 10ml (0.1% Bupivacaine + 2mcg/ml Fentanyl) bolus was given. Unilateral right-sided leg weakness was felt within 5 minutes; with MRC (Medical Research Council) grading of 2 throughout the right leg and 5 throughout contra-
laterally. Sensory to cold were T12 on the left and T8 on the right. There were no haemodynamic instabilities. The catheter tip was thought to be in the subdural space or partially in the intrathecal space. We managed her an-
gesia with the described low dose mixture titrated manually. A healthy boy
was delivered 6 hours after presentation; overall 2 boluses were required with excellent analgesia. The lady had tinnitus on day 1 postpartum, then a severe headache, which persisted until a successful epidural blood patch on day 4.
Results: This unusual block pattern had not been previously reported. Postdural puncture can present with unusual neurological symptoms with-
out headache initially. These symptoms must be identified at follow up. Early detection would have resulted in more timely intervention and resolu-
tion of symptoms.
Conclusions: High index of suspicion and vigilance are crucial in identifying complications following epidurals.

ESRA8-0012
E-POSTER VIEWING
OBSTETRIC
VITAMIN D, URIC ACID AND CHARACTERISTICS OF EPIURAL ANALGESIA FOR LABOR IN PARTURIENT WOMEN WITH PREECLAMPSIA
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Background and Aims: We study the relationship of pain in childbirth, char-
acteristics of epidural analgesia in patients with preeclampsia and the level of vi-
tamin D, the concentration of uric acid in the blood serum.
Methods: The study group included patients with severe and moderate pre-
eclampsia, alone have given birth vaginally with epidural analgesia. The control group included patients with physiological pregnancy, independently gave birth vaginally with epidural analgesia. The material of the study was to peripheral blood of pregnant women taken at admission to the hospital for delivery. Vitamin D level was performed by spectrophotometrically. Primary study end points defining a base for the conclusions were as follows: the level of vitamin D in ng / ml, the concentration of uric acid in the blood mmol/l, the average period for delivery systolic and diastolic blood pressure in mmHg, the dose of local anesthetic in mg.
Results: In patients with severe preeclampsia revealed: a pronounced defi-
ciency of vitamin D, a tough hyperuricemia, had higher numbers mean arterial pressure during labor epidural analgesia in the background: on average during all periods of childbirth 140/90-150/100 mm Hg. In patients with moderate pre-
eclampsia was diagnosed moderate vitamin D deficiency, mild hyperuricemia, blood pressure during childbirth averaged 130/90 - 125/85 mm Hg. In the con-
trol group the level of vitamin D and the concentration of uric acid were in the
normal range, blood pressure during labor averaged 105/60 - 120/70 mm Hg.
Conclusions: In women with preeclampsia during childbirth epidural analge-
sia, low levels of vitamin D and hyperuricemia are associated a higher demand
for local anesthetics.

ESRA8-0813
E-POSTER VIEWING
OBSTETRIC
PURINE METABOLITES IMPORTANCE IN PREECLAMPSIA AND ACUTE CEREBRAL STROKE
Oreshnikov E.1, Oreshnikova S.1, Oreshnikov A.2. Chuvash State University, Anaesthesiology & Intensive Care, Cheboksary, Russia.
Background and Aims: Accelerated cardiovascular disease in preeclampsia is
characterized by increased plasma concentrations of uric acid and increased levels of nucleic acid catabolites.
Methods: We measured the concentration of uric acid and the concentration of purine catabolites in plasma and cerebrospinal fluid of pre-eclamptic patients and healthy pregnant women. The material of the study was 30 pregnant women with preeclampsia and 30 healthy pregnant women.
Results: The level of uric acid and the concentration of purine catabolites in plasma and cerebrospinal fluid of preeclamptic patients were significantly higher than in healthy pregnant women. The level of purine catabolites in cerebrospinal fluid of preeclamptic patients was significantly higher than in healthy pregnant women.
Conclusions: The increased level of uric acid and the concentration of purine catabolites in plasma and cerebrospinal fluid of preeclamptic patients confirm the hypothesis of increased purine metabolism in preeclampsia. The increased level of purine catabolites in cerebrospinal fluid of preeclamptic patients confirm the hypothesis of increased purine metabolism in preeclampsia.
Background and Aims: Along with the classic triad edema, proteinuria, hypertension, more than a quarter century, many clinicians as an indicator of preeclampsia using the high content of uric acid in blood serum hyperuricemia. We know that most fatal pathogenesis (and tanatogenesis) in preeclampsia the development of stroke. Our attention was attracted by a comparative assessment of the features of purine metabolism in women with preeclampsia and acute cerebral stroke

Methods: The study involved 33 patients with preeclampsia and 350 patients in the acute period of cerebral stroke, in which, in addition to conventional laboratory parameters were determined in the blood and cerebrospinal fluid of guanine, hypoxanthine, adenine, xanthine and uric acid direct spectrophotometry. 

Results: It was established that between preeclampsia and cerebral stroke, there are clinical and pathobiochemical parallels, including according to the characteristics of purine metabolism. Hyperuricemia the most famous and at the same time the most pronounced adverse metabolic factor (marker, predictor) for preeclampsia, and for cerebral stroke. High value content oxypurines (hypoxanthine, xanthine and uric acid) in the cerebrospinal fluid a good sign for a stroke, and low for preeclampsia.

Conclusions: Liquor can be seen not only as a medium of administration of drugs for spinal anesthesia, but also a source of valuable diagnostic (and predictive) information, including in preeclampsia. The level of uric acid and other purine both patients with preeclampsia, and cerebral stroke, it is desirable to investigate not only in serum but when possible, and in cerebrospinal fluid.

ESRA-0432
E-POSTER VIEWING

OBSTETRIC

REGIONAL ANESTHESIA AND PLACENTA ACCRETA

Pyregov A., Korolev A. National Medical Research Center for Obstetrics- Gynecology and Perinatology named after Academician VI. Kadakov of Ministry of Healthcare of Russian Federation, Anaesthesiology And ICU, Moscow, Russia.

Background and Aims: Over the last 30 years, the incidence of placenta accreta (PA) has increased more than 8 times. The use of regional anesthesia (RA) can reduce the amount of blood loss (BL), blood transfusions (BT) and amount of complications. The goal of our study was to evaluate if RA is safe and effective in case of CS in women with PA.

Methods: The study was approved by ethics committee. After obtaining informed agreement, in the study there were included 20 patients with PA, 21-42 y.o., 34-38 weeks of pregnancy, going to elective CS. Combined spinal-epidural anesthesia (CSEA) «needle through the needle» with hyperbaric bupivacaine (2.0-2.8ml) was used, to achieve the anesthesia level T6-T7. Inhibitors of fibrinolysis (IF) were administered before operation. The maintenance of hemodynamics (H) was performed by infusion of norepinephrine (20-450 ng/kg/min). Indicators of H, BL, requirements for transfusion, and Apgar score (As) were evaluated. For statistical calculations we used the program Statistica 6.0.

Results: CSEA was effective and safe procedure. The medium BL - 2463 ±587ml (p<0.05). The number of red blood cell unites - from 2 to 5. As directly depended on the age of gestation only. There was one post-puncture headache. There was no need for conversion to GA.

Conclusions: CSEA has proved to be an effective, safe and comfortable for patients with PA, giving stable H. Along with the use of IF, it, probably, allows to reduce bleeding. It is necessary to continue the study for creating an algorithm for anesthesia for such patients and criteria for conversion to GA.

ESRA-0316
E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

ERECTOR SPINAE PLANE BLOCK FOR BREAST CANCER SURGERY. A CASE SERIES

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Background and Aims: Postoperative pain for breast cancer surgery (BCS) can be managed with regional anesthesia. Erector spinae plane (ESP) block has been recently described for thoracic surgery. The aim of this study is to evaluate postoperative pain in BCS after performing ESP block. We also recorded opioid consumption, incidence of postoperative nausea and vomiting (PONV) and length of stay (LOS).

Methods: We retrospectively analysed patients who underwent BCS with general anaesthesia and ESP block for postoperative pain management between October 2017 and April 2018. US-guided ESP block by a single puncture at T5 level with minimal sedation was performed. We administered levobupivacaine 0.3% (30mL) as local anesthetic. Afterwards, the patient received a total intravenous anaesthesia. Moreover, all patients received intraoperatively dexketoprofen and paracetamol and antiemetic prophylaxis.

Postoperative pain was measured by using VAS score (0-10) when patients arrived at Post Anaesthesia Care Unit (PACU), when they left PACU and 24h after surgery. We administered opioids if VAS score was higher than 3.

Results: We recorded data from 16 women: 3 patients underwent mastectomy and 13 tumorectomy plus sentinel lymph node biopsy. Median VAS scores were 1.56 (0-5) at PACU, 0.25 (0-2) after PACU and 0.27 (0-3) 24h after surgery. Five patients needed minor opioids at PACU. None of them needed major opioids. One patient had PONV. Median LOS was 1.25 days.

Conclusions: Postoperative VAS scores in patient who underwent ESP block were low. In our experience, ESP block provides good postoperative analgesia in BCS. Patients rarely needed opioids, had low incidence of PONV and short LOS.
POSTOPERATIVE PAIN MANAGEMENT

EVALUATION OF POSTOPERATIVE ANALGESIC REQUIREMENTS FOLLOWING PRIMARY AND REVISION ELBOW REPLACEMENTS

Ali A.1, Banks A.2, Hassan A.1 1Nottingham university hospital, ANAESTHETIC, NOTTINGHAM, United Kingdom, 2Nottingham university hospital, Anaesthetics, Nottingham, United Kingdom.

Background and Aims: The data regarding elbow arthroplasty is scarce as the numbers of elbow procedures are much less compared to hips, knees and shoulders. According to the national joint registry, 787 elbow replacements were done in 2017 in the UK which constitutes 1% of hip or knee arthroplasty. In our project, we reviewed postoperative pain scores and analgesic requirements on day zero and day one following primary and revision elbow replacements.

Methods: Data were collected retrospectively for the period (June 2016-Dec 2017). 23 cases identified (13 primary and 10 revisions). All cases had general anaesthetics plus ultrasound guided Supraclavicular nerve block. The block was done using either Ropivacaine (150 mgs) or LevoBupivacaine (75-112.5 mgs). Ropivacaine was used in four revision arthroplasties (40%) and seven primary arthroplasties (53%). Postoperative pain score (mild, moderate or severe) and total opioid requirements on day zero and day one after the surgery were compared.

Results: Despite having comparable pain scores and median opioid requirement on day zero, there was a significant difference on day one. On day one, median opioid requirement for primary arthroplasty was 20 mgs of IV morphine compared to 14.5 mgs for the revision group. While five patients (37%) in the primary group had moderate to severe pain, no patients in the revision group had similar pain scores.

Conclusions: Revision elbow procedures required less post-operative opioids compared to primary procedures. Median opioid requirement on day one post-operative was 27% less in the revision group. These results need to be supported by larger, multicentred studies.

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Conclusions: Revision elbow procedures required less post-operative opioids compared to primary procedures. Median opioid requirement on day one post-operative was 27% less in the revision group. These results need to be supported by larger, multicentred studies.
Local infiltration of local anesthetic at the port sites and intra-operative intravenous lidocaine infusion become the "gold standard" although this two techniques are far from "perfect".

For our team the trans muscular quadratus lumborum block has the potential to surpass these well-established techniques.

**Methods:** We selected 20 patients for ambulatory laparoscopic abdominal surgery ASA I–II. The interventions selected were cholecystectomy, laparoscopic hernia repair and sigmoidectomy.

All patients received ultrasound guided bilateral transmuscular quadratus lumborum block preoperatively, before the induction of general anesthesia with 20 mL of 0.375% Ropivacaine and 2 mg Dexamethasone on each side. There was no port site infiltration at the end of surgery nor Lidocaine infusion during the surgery.

The patient were surveyed in PACU 1 h after the operation, they were visited before leaving the ward and they received a phone call the day after the surgery.

**Results:** All patients had satisfactory intraoperative analgesia, with minimal needs of additional opioids. All patients had excellent postoperative analgesia with paracetamol and NSAIDs and Nefopam. Six patients needed low dose postoperative titration of Oxycodone (<5 mg) postoperatively at day 1; all patients have used just paracetamol, NSAIDs on regular basis without side of more potent analgesics. There was no in-tra- or postoperative adverse reactions or complications. **Conclusions:** The Transmuscular QLB was effective technique for intra and postoperative analgesia, without major side effects or complications. Further studies could establish the existence of advantages compared to the "standard" approaches.

### Postoperative Pain Management

#### Transmuscular Quads Block for Intra-And Postoperative Analgesia

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All patients received ultrasound guided bilateral transmuscular quadratus lumborum block preoperatively, before the induction of general anesthesia with 20 mL of 0.375% Ropivacaine and 2 mg Dexamethasone on each side. There was no port site infiltration at the end of surgery nor Lidocaine infusion during the surgery.

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**Postoperative Pain Management**

**Continuous Perineural Catheter Local Anaesthetic Infusions for Management of Acute Pain after Lower Limb Amputation**

**Background and Aims:** Lower limb amputation (LLA) is a painful procedure, with post-operative recovery frequently complicated by pain. Poorly controlled acute pain is a risk factor for developing chronic stump pain and phantom limb pain (PLP). Regional anaesthesia remains the gold standard for care for LLA. We analysed our local practice, where we aim to site ultrasound-guided perineural catheters for all LLAs.

**Methods:** We performed retrospective analysis of medical notes for patients who had perineural catheters placed for LLA between 2010 and 2017 (identified from our hospital’s acute pain database). Data collected included type of catheter inserted (femoral or sciatic), pain scores at rest and movement (verbal rating scale 0 to 10) at 24, 48 and 72 hours post-op, maximum documented pain score, duration of infusion and reasons for discontinuation. We also evaluated the impact of nerve catheters on post-operative length of stay (LOS), when compared with amputations without perineural LA infusion.

**Results:** Eighty-five sets of patient notes were analysed, comprising 33 femoral nerve catheters (FNC) and 52 sciatic nerve catheters (SNC). Mean infusion duration was 5.6 days (FNC) and 6.1 days (SNC). Mean post-operative pain scores were low for both FNC and SNC (Table 1). There was no significant impact on LOS between patients with without perineural catheters.

### Postoperative Pain Management

**E-POSTER VIEWING**

**ESRA8-0317**

**E-POSTER VIEWING**

**ESRA8-0133**

**Continuous Perineural Catheter Local Anaesthetic Infusions for Management of Acute Pain after Lower Limb Amputation**

**Background and Aims:** Lower limb amputation (LLA) is a painful procedure, with post-operative recovery frequently complicated by pain. Poorly controlled acute pain is a risk factor for developing chronic stump pain and phantom limb pain (PLP). Regional anaesthesia remains the gold standard for care for LLA. We analysed our local practice, where we aim to site ultrasound-guided perineural catheters for all LLAs.

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### Postoperative Pain Management

**E-POSTER VIEWING**

**ESRA8-0725**

**Continuous Perineural Catheter Local Anaesthetic Infusions for Management of Acute Pain after Lower Limb Amputation**

**Background and Aims:** Lower limb amputation (LLA) is a painful procedure, with post-operative recovery frequently complicated by pain. Poorly controlled acute pain is a risk factor for developing chronic stump pain and phantom limb pain (PLP). Regional anaesthesia remains the gold standard for care for LLA. We analysed our local practice, where we aim to site ultrasound-guided perineural catheters for all LLAs.

**Methods:** We performed retrospective analysis of medical notes for patients who had perineural catheters placed for LLA between 2010 and 2017 (identified from our hospital’s acute pain database). Data collected included type of catheter inserted (femoral or sciatic), pain scores at rest and movement (verbal rating scale 0 to 10) at 24, 48 and 72 hours post-op, maximum documented pain score, duration of infusion and reasons for discontinuation. We also evaluated the impact of nerve catheters on post-operative length of stay (LOS), when compared with amputations without perineural LA infusion.

**Results:** Eighty-five sets of patient notes were analysed, comprising 33 femoral nerve catheters (FNC) and 52 sciatic nerve catheters (SNC). Mean infusion duration was 5.6 days (FNC) and 6.1 days (SNC). Mean post-operative pain scores were low for both FNC and SNC (Table 1). There was no significant impact on LOS between patients with without perineural catheters.
Background and Aims: Adequate postoperative pain relief is key to early recovery. Use of intrathecal morphine (IT morphine) has become increasingly common practice. Adding Transversus Abdominal Plane block (TAP block) is thought to improve pain relief and reduce opiate requirement.

The aim of our study was to determine if addition of TAP block improved postoperative outcomes.

Methods: We did a retrospective review of all major elective laparoscopic urology surgeries dating as far back as December 2014. We looked at all the procedures in which IT morphine was administered at time of induction of anaesthesia. Cases that were missing data, or for which the clinical notes were not obtained were excluded from the study.

Patients were divided in to two groups:
1. Patients who received IT morphine as well as a TAP block and/or WI.
2. Patients who received IT morphine without a TAP block and/or WI. The two groups were compared in regards to the following:
1. VAS Pain scores up to 48 hours postop.
2. Amount of IV PCA morphine and/or other opiates/analgesics used up to 48 hours postop.
3. Occurrence of side-effects: N&V, pruritus, respiratory depression, hypotension, oliguria.
4. Time to commencement of oral intake.
5. Time to mobilisation.
6. Duration of hospital stay.

Results: Patients who received IT morphine alone had lower pain scores and less use of IV PCA morphine (P=0.00124 and P=0.04036). However consumption of other opiates/analgesics was higher in the IT morphine only group.

Conclusions: Our study demonstrates that addition of TAP block did not add any benefit in terms of postoperative VAS pain scores or use of IV PCA morphine postop. However, use of other analgesics was less.

ESRA-0265
E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

PERIOPERATIVE MULTIMODAL ANALGESIA IN MINIMALLY INVASIVE ORTHOPEDIC AND TRAUMATOLOGY OPERATIONS

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Background and Aims: 30-50% of patients during minimally invasive operations receive inadequate analgesia, which leads to the deterioration of the operations results. Use of narcotic analgesics often accompanied by multiple side effects, so effective and safe methods of analgesia with non-narcotic drugs is needed. Our aim was to evaluate the effectiveness and safety of perioperative multimodal analgesia with complex use of non-opioid analgesics.

Methods: Study was performed in two groups of patients, who underwent minimally invasive operations of lower limbs with the spinal anesthesia. The first group (89 patients) received non-opioid analgesics (paracetamol and desketoprofen) in 3-steps method; the second group (61 patients) received promedol 20mg 1-2 times a day. In both groups patients also received adjuvant drugs (3-step analgesia): first, desketoprofen 50mg IM within 30 minutes before surgery; second, 1000 mg of paracetamol IV intraoperatively; and third, after surgery, every 8 hours , paracetamol 1000mg IV (up to 4 days), desketoprofen 50mg IM (up to 7 days).

Results: The time of analgesia achievement and severity of pain by VAS were not different in the two groups; duration of analgesia was longer in the first group: (8.1 ± 1.9) vs (5.7 ± 1.6) hours in the second. The need in analgesics was shorter in first group: (3.2 ± 1.0) days and (4.3 ± 1.9) days in second group. In second group, about 20% of patients experienced side effects typical for opioids, which were not observed in first group.

Conclusions: Multimodal perioperative non-opioid analgesia is effective and safe in minimally invasive orthopedic and traumatologic surgery.

ESRA-0153
E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

OPIOID REDUCTION STRATEGIES UTILIZING ESMOLOL DURING SHOULDER SURGERY REDUCES UNANTICIPATED SAME-DAY ADMISSIONS WITHOUT INCREASING 30 DAY READMISSIONS OR EMERGENCY VISITS

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Background and Aims: Enhanced Recovery After Surgery (ERAS) protocols improve patient safety by reducing opioid requirements with improved discharge times. Esmolol paired with continuous peripheral nerve blocks have been demonstrated to decrease intraoperative opioid requirements. The purpose of this study is to evaluate the impact of such protocols decreasing unanticipated admissions on the day of surgery, decreasing 30 and 60 day readmission, and emergency department visits.
Methods: IRB approval was obtained prior to a retrospective chart analysis of 356 shoulder arthroscopic surgery patients from a community hospital. 216 patients received an ERAS protocol utilizing esmolol and 140 patients did not receive an ERAS protocol. Both groups received continuous brachial plexus blocks with 0.2% ropivacaine at 5ml/hr for >48 hours.

Results: The ERAS protocol group had a statistically significant decreased unanticipated same-day admissions (p value <5) as compared to the Non-ERAS protocol group. The ERAS group had 5 of 216 and the Non-ERAS had 13 of 140 unanticipated same-day admissions. The top three reasons for the admissions were respiratory depression, poorly controlled pain, and postoperative nausea and vomiting. There were no statistical differences in thirty and sixty day emergency department visits or readmissions during this time period.

Conclusions: The ERAS group had a 75% reduction in day of surgery unanticipated admissions without increasing 30 and 60 day emergency department visits and readmissions during the postoperative period. This is likely due to the reduction in common postoperative admissions related to complications associated with opioids such as respiratory depression and postoperative nausea and vomiting while postoperative pain control was enhanced.
Conclusions: The use of esmolol during the intraoperative period as part of an ERAS protocol and opioid reduction technique decreased length of stay following total knee arthroplasty surgery and decreased readmission and emergency department visits over 30 and 60 days postoperatively in a community hospital setting. This is encouraging evidence that community hospital programs can replicate university type outcomes.

ESRA8-0338
E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

SERRATUS PLANE COMBINED WITH PECS 1 BLOCK IS EASY TO PERFORM AND EFFICIENT REGIONAL ANAESTHESIA METHOD FOR PATIENT UNDERGOING MASTECTOMY

But M.1, Moszczynski P.1, Kruczkowski A.1, Zielinski J.2 1Regional Hospital in Koszalin, Department of Anaesthesiology an Intensive Care, Koszalin, Poland, 2Medical University of Gdansk, Department of Surgical Oncology, Gdansk, Poland.

Background and Aims: Mastectomy is one of the options of surgical treatment of the breast cancer that leads to acute post-surgical pain. Based on experience and clinical reports (Benjamin Fox), the authors hypothesized that a good analgesia within the thoracic and axillary region gives administration of a local anesthetic in the fascia between the serratus and intercostal muscle at the level of the fifth rib (Serrato-Intercostal Plane Block, SIP) combined with PECS 1.

Methods: This study is a case series report. The authors performed 20 SIP combined with PECS 1 blocks in patients ASA 1-3 qualified to mastectomy with axillary lymphadenectomy in general anesthesia.

Primary and secondary end-points:
- time of execution of individual blockade
- requirements for fentanyl during the operation
- pain intensity-Numeral Rating Scale (NRS) when admitted to the recovery room, 1, 4, 8, 12, 16, 20 and 24 hours after the operation.
- the need for analgesics in the postoperative period-NCA (total amount of morphine given and time of first dose) and occurrence of nausea
- vomiting first postoperative

Results: Time of execution of combined blockade was average 4.5 min. There was no need of fentanyl administration during operation except of induction to the general anesthesia Pain intensity NRS was on average 1,4,8,12,16,20,24 hour after operation respectively 2:2;2:2;3:2;3:2;8:2;4:2,2Total amount of morphine given in patients who reported NRS > 3 (4 patients) was 4 mg. 16 patients reported NRS <3 in postoperative period.

Conclusions: Combined PECS 1 and SIP is easy to perform and effective regional anesthesia method for patients undergoing radical mastectomy.

ESRA8-0154
E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

INTRAVENOUS DEXMEDETOMIDINE AMPLIFIES EPIDURAL ANALGESIA IN OPEN THORACOTOMY


Background and Aims: This study conducted to know the effect of adding dexmedetomidine in epidural analgesia after thoracotomy surgery.

Methods: Forty-four patients scheduled to go to intensive care unit (ICU) after open thoracotomy were divided into two groups. An epidural catheter was placed on level T4 to T7. Before 30 minutes at the end of surgery, group D was injected with 0.3 μg/kg/h of dexmedetomidine and group C was kept in the same dose of normal saline. For patient controlled epidural analgesia (PCEA), a 150 mL of levobupivacaine 300 mg was infused 1 mL/h plus a bolus dose of 3 mL with a lockout time of 30 min through the epidural catheter. The primary outcome evaluated was analgesic efficacy using the visual analogue scale (VAS) for 72 h postoperatively. Other outcomes included additional analgesic use, total consumed local anesthetics of PCEA, sedation score, blood pressure, heart rate, arterial blood gas analysis, patient satisfaction, and adverse effects were monitored.

Results: The VAS and total dose of additional opioids in group D was significantly lower than group C. The sedation score of group D was lower than group C at immediately admitting in the ICU. The patient satisfaction was higher in group D. Blood pressure, heart rate, total consumed local anesthetics of PCEA, arterial blood gas analysis, and the occurrence of adverse events were not significant different in both groups.

Conclusions: Intravenous infusion of dexmedetomidine during ICU management amplifies thoracic epidural analgesic effect after open thoracotomy.

ESRA8-0280
E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

POSTOPERATIVE ANALGESIA FOR BREAST RECONSTRUCTION SURGERY BY LATISSIMUS DORSI (LD) FLAP WITH REGIONAL BLOCKS OF THE TORACIC WALL: CASE REPORT

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Background and Aims: Breast cancer is the most common cancer affecting women, accounting for 31% of all new cancer cases in the female population. Breast cancer surgeries cause significant acute pain and may progress to chronic pain states in 25% to 60% of patients at the aims of this case report was to show a satisfactory postoperative pain control for radical mastectomy with axillary clearance and primary reconstruction by latissimus dorsi (LD) flap with general anaesthesia (GA) associated by ultrasound guided PECS 1, 2 and serratus plane blocks.

Methods: Case Report. A 52-year-old woman, ASA 2, 60kg diagnosed with right-sided breast malignancy was scheduled for breast conservation surgery with excision of the axillary nodes followed by reconstruction using a LD pedicle flap. Midazolam IV, induction of GA with sufentanyl, propofol and rocuronium IV Maintenance: remifentanyl and propofol IV. Ultrasound guided PECS 1, 2 and Serratus plane blocks were performed with 20mL ropivacaine 0.2 % for each one, without problems. Dexamethasone, cetoprofeno and ondansetron were administered into the anaesthesia care unit (PACU) lasting 1.30 hour. Postoperative pain intensity was assessed using the visual analog scale score. VASS=0 at PACU discharge, and 12h later VASS=0. The patient was discharged from the Hospital on the 3rd postoperative day with oral analgesics. Her experience with pain control was satisfactory.

Conclusions: PECS 1, 2 and serratus plane blocks were satisfactory for postoperative analgesia for breast reconstruction surgery including LD flap reconstruction.
POSTOPERATIVE PAIN MANAGEMENT

ATERIOR CRUCIALE LIGAMENT RECONSTRUCTION
Conclusions: After Ethics Committee approval, 50 patients ASA I-II scheduled
Methods: Fifty years old woman scheduled for right inferior lobectomy by
Background and Aims: Postoperative pain increases the morbidity and mor-
tality after surgery. It gains importance in thoracic surgery, because the rehabil-
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ESRA Abstracts

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POSTOPERATIVE PAIN MANAGEMENT

THE COMPARISON OF SERRATUS ANTERIOR PLANE BLOCK VERSUS INTERCOSTAL BLOCK FOR POSTOPERATIVE ANALGESIA FOLLOWING THORACOTOMY SURGERY

ESRA8-0421

E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

SSTS (ZALVISIO®) IS A VAILABLE ALTERNATIVE TO REGIONAL ANESTHESIA FOR POST OPERATIVE PAIN MANAGEMENT IN THORACIC SURGERY

ESRA8-0407

E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

PREEMPTIVE ETORICOXIB ADMINISTRATION VERSUS FEMORAL NERVE BLOCK FOR ANALGESIA AFTER ANTERIOR CRUCIALE LIGAMENT RECONSTRUCTION

ESRA8-0292

E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

SSTS EFFICACY AFTER THORACIC SURGERY. DATA COLLECTED WERE: TABLETS CONSUMPTION; PAIN (NRS FOR THE FIRST 72 HOURS) AT REST AND COUGHING; PRE- AND POST-OPERATIVE EFFICIENCY IN INCENTIVE SPIROMETER (TRIFLO). WE PRESENT PRELIMINARY RESULTS OF THE FIRST 20 PATIENTS INCLUDED.

ESRA8-0407 E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

PAIN AFTER THORACOTOMY IS SEVERE AND COULD AFFECT PULMONARY FUNCTION BY REDUCING DEEP BREATHING AND COUGHING ABILITY. RESULTING IN REDUCED CLEARANCE OF SECRETIONS AND PNEUMONIA.

ESRA8-0421 E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

ANALGESIA WITH SUFENTANIL SUBLINGUAL TABLET SYSTEM (ZALVISIO®) IS EFFECTIVE FOR PAIN CONTROL AFTER ABDOMINAL AND ORTHOPEDIC SURGERY.

ESRA8-0292 E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

THE CURRULMINE MORPHINE CONSUMPTION.

ESRA8-0155

E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

E-POSTER VIEWING

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POSTOPERATIVE PAIN MANAGEMENT

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POSTOPERATIVE PAIN MANAGEMENT
Conclusions: These preliminary results show that SSTS is a valid alternative to regional techniques for postoperative pain management after thoracic surgery. It is not invasive and it is effective at very low doses.

ESRA8-0313
E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

BILATERAL SINGLE-SHOT QUADRATUS LUMBO RUM BLOCK FOR POST-OPERATIVE PAIN RELIEF IN A BREASTFEEDING WOMAN


Background and Aims: Post-laparotomy pain is often difficult to control, and intravenous analgesia must be careful in breastfeeding women. Bilateral single-shot quadratus lumborum block (QLB) produces sensitive block from T6-L2 which promotes visceral and somatic pain relief for an extended period, diminishing the need of a continuous technique.

Methods: Breastfeeding woman, 39, ASA I, with fever and leukocytosis, PCR 15.99 mg/dl. Exploratory laparotomy was performed by dehiscence of the uterine anastomosis, 6 days after caesarean section. A general anesthesia was performed, with multimodal analgesia in the intraoperative period. A bilateral QLB was performed with ropivacaine 0.375%, 20 mL each side, ultrasound guided at the site of the surgery. The patient reported pain EN 0/10, without requirement of additional analgesic therapy at the PACU. Paracetamol 1g 3 tid was added to the analgesic regimen. Patient reported pain EN 2/10 up to 36h postoperatively.

Results: Pain control after laparotomy with intravenous analgesia is difficult without the use of large doses of opioids. Effective pain management is of great importance in a puerperal patient with the need for breastfeeding of the newborn. The possibility of bacteremia is a relative contra-indication for epidural catheterization. In this case report, the bilateral single-shot QLB has been shown to be effective in pain control without the need for IV opioids or epidural catheterization.

Conclusions: This case suggests the effectiveness of bilateral single-shot QLB in the control of post laparotomy pain, decreasing the use of intravenous analgesia in a breastfeeding woman.

ESRA8-0347
E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

ROLE OF CONTINUOUS INFRACLAVICULAR BRACHIAL Plexus BLOCK IN ISQUEMIC PAIN MANAGEMENT


Background and Aims: An infraclavicular brachial plexus block provides effective postoperative analgesia, for upper extremity, below the elbow. Chest is the ideal site for catheter placement and fixation. This technique is extremely value for procedures that require long and ischemic pain control.

Methods: A 33-year-old man, ASA I, was proposed for hand and wrist fasciotomy due to compartmental syndrome.

Patient was submitted to surgical correction of distal radius fracture, two months ago. He presented at emergency service with excruciating pain, oedema and functional limitation.

Compartmental syndrome was diagnosed and emergent fasciotomy was performed, under general anesthesia.

After the surgery, ultrasound-guided infraclavicular brachial plexus block was performed. Perineural catheter was placed and continuous infusion (5ml/h) of Ropivacaine 0,2%, using a drug infusion balloon, after an initial bolus of 20ml of ropivacaine 0,375%, was maintained for 6 days.

Results: Patient experienced controlled pain (NRS 0-3/10). On postoperative day 3, Ropivacaine infusion was interrupted and patient complained about intense pain (NRS 5-7/10) with sleep disturbance. Ropivacaine infusion was restarted, with pain relief (NRS 0/10). Hospital discharge took place on postoperative day 6.

Conclusions: Vigorous postoperative analgesia was achieved with continuous infraclavicular brachial plexus block in a patient that suffered a compartmental syndrome. Moreover, catheter fixation was stable, because the range of motion was limited due to the presence of pectoral muscles and because the insertion point was distal to clavicle, avoiding kinking or catheter dislocation associated to neck movements.

ESRA8-0353
E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

SINGLE SHOT ERECTOR SPINAE PLANE BLOCK (ESPB) VERSUS CATHETER FOR ONCOPLASTIC RECONSTRUCTIVE BREAST SURGERY WITH LATISSIMUS DORSI FLAP

D'souza N., Dikshit A., Patil R. Ruby Hall Clinic- Pune, Department of Anesthesia, PUNE, India.

Background and Aims: Erector spinae plane block has emerged as a simple, suitable alternative for analgesia of the entire hemithorax, in comparison to central neuraxial blocks with similar pain relief and potentially lesser side effects. We studied single shot ESPB versus ESP catheter in oncoplastic reconstructive breast surgery with a latissimus dorsi flap.

Methods: Five patients of ASA 1 or 2 posted for breast reconstruction surgery with a latissimus dorsi flap were randomly chosen to have either the catheter or single shot ESPB block at thoracic level 5, postoperatively. 0.375 % Ropivacaine 20ml instilled under ultrasound guidance in both groups and catheters were inserted in 2 patients. Amongst these, 2 received catheters (C) whereas 3 others received single shot (S) blocks. The VAS scores, time to request of first analgesic, number of rescue analgesics and hospital stay noted.

Results: The surgery duration in all cases was comparable at an average of 4.2 hours. The pain relief over 36 hours was comparable. VAS scores at 0,3,6,12,18 and 24 hours were comparable (VAS < 2). One in the C group reported a pulling sensation in the back despite good pain relief, similarly 2 patients in group S reported the same. The rescue analgesics used were likewise comparable. The catheter group received a single top up after 24 hours. The discharge time and total hospital stay were also comparable (average 3days).

Conclusions: Patients undergoing oncoplastic reconstructive breast surgery with latissimus dorsi flap have adequate post-operative analgesia and similar hospital stay with single shot ESPB or an ESP catheter.
ESRA-0384

E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

A STUDY OF PERIOPERATIVE PAIN MANAGEMENT IN VASCULAR PATIENTS PRESENTING FOR LOWER LIMB AMPUTATION

Duraiswamy V.1, Koztradimiotou K.2, Krol A.1, Malik A.1,2,3, Stegeorge’s University Hospital, Anaesthetics, London, United Kingdom, 2St.George’s University Hospital, Vascular Surgery, London, United Kingdom.

Background and Aims: St. George’s University Hospital is a tertiary referral centre for complex vascular surgery. The main aim of the study is to improve the pain management of vascular patients presenting for lower limb amputation.

Our aim is to place a sciatic nerve block catheter for all the patients having a lower limb amputation and their pain score should be ≤ 2 in our trust pain scale during the first 72 hours.

Methods: Forty-four vascular patients underwent lower limb amputations between May 2017 to April 2018. Retrospective data were collected from the nerve block LA infusion chart, anaesthetic chart and drug chart. Pain scores were analysed based on a numerical rating scale of 0-4 (0=no pain at rest, 1=mild pain on movement, 2=moderate pain, 3=severe pain on movement and 4=continuous pain at rest).

Results: Out of 44 patients, 3 patients had through knee amputation, 20 patients had Below Knee Amputation and 21 patients had Above Knee Amputation. Sciatic nerve block catheter was inserted in 41(93%) patients. Out of 21 AKA patients 17(70.8%) had a combined sciatic and femoral nerve block. On analysing pain scores, we noticed on day 1, 34(82.9%) patients had a pain score of ≤ 2 and on day 2 & 3, 36(87.8%) patients had pain score of ≤ 2.

Conclusions: This study shows that sciatic nerve block catheter LA infusion in lower limb amputation patients had consistently low pain scores. When compared to the previous audit in 2016, we significantly increased our sciatic nerve catheter LA infusion service from 14% to 93%.

ESRA-0257

E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

ABSTRACT: COMPARISON OF TRADITIONAL AND ENHANCED RECOVERY AFTER SURGERY PROTOCOLS AMONG WOMEN UNDERGOING MASTECTOMY


Background and Aims: Acute post-surgical pain is difficult to manage in patients undergoing breast cancer surgery. An ERAS protocol for mastectomy patients was developed in 2016. This study aims to compare pain scores, narcotic use, postoperative nausea and vomiting and antiemetic administration between two groups: traditional recovery after surgery (TRAS) or the ERAS protocol.

Methods: A retrospective chart review of TRAS and ERAS for mastectomy patients who received Traditional Recovery After Surgery (TRAS) or the ERAS protocol.

Results: Out of 102 patients, 51 patients having mastectomy surgery from January to May 2016, prior to ERAS implementation, and 51 patients having mastectomy surgery after implementation of ERAS protocols. A statistical power analysis determined a necessary sample size of 102. Two groups were evaluated: 51 patients having mastectomy surgery from January to May 2016, prior to ERAS implementation, and 51 patients having mastectomy after implementation of ERAS protocols.

Results: No significant differences were found between the groups in terms of demographics or pain history. A significant difference was found on POD0 between TRAS and ERAS groups in antieptic use, mean and max pain scores with ERAS being significantly lower. Oral morphine equivalent intake was significantly less on POD0 and POD1 in the ERAS group. On POD0 the oral morphine equivalent was 58.3 mg for TRAS compared with 26.7mg for ERAS and on POD1 was 20.8 mg for the TRAS group, significantly higher than the 4.7 mg average in the ERAS group.

Conclusions: The incorporation of ERAS measures into the surgical care for mastectomy surgery can positively affect recovery. This ERAS protocol may improve pain control, reduce PONV, and reduce opioid adverse events.

ESRA-0183

E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

ANALGESIC REQUIREMENTS IN SUPER MORBID AND MORBID OBSESE BARIATRIC PATIENTS UNDERGOING LAPAROSCOPIC SLEEVE GASTRECTOMY: A PROSPECTIVE OBSERVATIONAL STUDY

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Background and Aims: Opioid analgesia is associated with serious adverse effects; hypotension, hypoxaemia, increased hospital stay and ileus. Our aim was to investigate analgesic requirements for super morbid obese, (BMI ≥ 50 kg/m²) when compared to morbid (BMI 40-49.9 kg/m²) individuals undergoing sleeve gastrectomy and its impact on postoperative outcome.

Conclusions: The incorporation of ERAS measures into the surgical care for mastectomy surgery can positively affect recovery. This ERAS protocol may improve pain control, reduce PONV, and reduce opioid adverse events.
Methods: We studied 297 consecutive patients (183 MO, 96 SMO) underwent bariatric surgery. Data analysis included perioperative anesthetic management and postoperative outcome.

Results: SMO patients exhibited higher asthmatics percentage (P = 0.016) and ASA III (P < 0.001). Lower serum albumin (P = 0.001) and higher INR levels (P = 0.020) were observed in SMO group, respectively (P = 0.001), (P = 0.033), (P < 0.001), (P = 0.017) (Table 2). Total morphine equivalent consumption dosages and VAS score were comparable in both groups at admission, stay or leaving PACU. Vomiting was higher in MO group, (P = 0.004). ICU admission was higher at SMO group (P < 0.001), however, PACU stay time was comparable, (P =0.060) (Table 3).

Conclusions: We found no differences in perioperative analgesics consumption or postoperative outcome in between the studied groups except longer ICU stay, prolonged anesthesia time, increased crystalloid intake and urine output in SMO patients.

ESRA8-0465 E-POSTER VIEWING POSTOPERATIVE PAIN MANAGEMENT

ULTRASOUND-GUIDED SERRATUS PLANE BLOCK WITH CONTINUOUS POSTOPERATIVE DRUG DELIVERY SYSTEM FOR ACUTE NOCICEPTIVE AND NEUROPATHIC PAIN AFTER MASTECTOMY

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1Medical Research Institute, Anaesthesia and Pain Medicine, Alexandria, Egypt, 2Medical Research Institute, Surgery, Alexandria, Egypt.

Background and Aims: The current study compared the effect of pre-emptive serratus plane block (P-SPB), with postoperative drug delivery to serratus plane or around the wound, on acute nociceptive and neuropathic post-mastectomy pain.

Methods: After taking ethical committee approval and patients’ consents, 40 women enrolled in the study. Patients were assigned to 2 groups; Group S, received P-SPB which continued postoperative by delivering 6 ml/h bupivacaine 0.125% for 24 hrs, Group L: received P-SPB with 2 lidocaine 5% patches(LP) around the wound 12 hrs/day for 24 hrs. IV morphine (3 mg) was given to patients with VAS>3.

Primary outcome measured VAS for nociceptive pain at rest and arm movement for 24 hrs postoperative. Secondary outcomes included incidence, characteristics and severity of acute neuropathic pain, using DN4 questionnaire and Neuropathic Pain Scale for 4 weeks. Hypothesia to touch and temperature, mechanical allodynia and hyperalgesia were assessed at ipsilateral T2-T6 dermatomes. Pain-aggravating factors and patient satisfaction with analgesia were measured.

Results: There was no significant difference between groups regarding: VAS at rest and movement, incidence, duration and sites of neuropathic pain and its effect on sleep, mood and work. The most frequent complaints in both groups were numbness, dull aching and sharpness. The intensity of numbness and pain associated lifting heavy objects were significantly higher in Group S at the 3rd postoperative week. Satisfaction score was higher in Group L.
Conclusions: LP as a part of multimodal analgesia is effective as SPB, in reducing nociceptive pain, more superior in reducing numbness and favored by patients after mastectomy.

ESRA-0359
E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

QUADRATUS-LUMBORUM-BLOCK II FOR ANALGESIA IN ROBOTIC PROSTATECTOMY: A WINNING TECHNIQUE IN ACCORDANCE WITH THE "ERAS" STRATEGIES
Fusco P.1, de Paolis V.1, De Sanctis F.1, Di Carlo S.1,2, Marinangeli E.1, Volpe D.1,2

Background and Aims: The new ultrasound-guided Quadratus-Lumborum block is an "interscalene-plane block" of posterior abdominal wall. It could provide a wider coverage and long-lasting analgesia in a multimodal approach to postoperative pain for robotic abdomino-pelvic laparoscopy.

Methods: We present the case of a 62-year-old man, BMI=31, ASA II, without cardiovascular/pulmonary comorbidities, scheduled for robotic-assisted radical prostatectomy. After vital signs monitoring, general anesthesia was induced with propofol 200mg, Fentanyl 0.10 mg and Rocuronium 50 mg, and maintained with Remifentanil, administered via target-controlled infusions (TCI), and Desflurane 1 MAC. At the end of the surgical procedure we performed ultrasound-guided bilateral QLB II-block: we injected 20 ml of Levobupivacaine 0,375%, bilaterally, on the posterior side of the Quadratus-Lumborum Muscle (QLM) between the QLM and the medial lamina of Thoracolumbar Fascia (TLF) in the lumbar interfacial triangle. Analgesic therapy included also Paracetamol 1 gr, Morphine 5 mg (0.05 mg/kg), administered 30 minutes before the end of surgery.

Results: At emergence from general anesthesia we observed vital signs stability without complications. The patient referred low pain values both when resting (NRS 1) and moving (NRS 2-3) tending to further reduction in the following 8-24-48 postoperative hours. We observed early mobilization and return of bowel function within 24 hours. No rescue medication was necessary.

Conclusions: In robot-assisted-laparoscopic-surgery, abdominal and incisional pain are prominent sources of moderate dynamic pain. QLB II block provided good-quality analgesia in the postoperative period and could be a suitable opioid sparing technique in a multimodal analgesic plan. Further studies are needed to confirm our results.

ESRA-0359
E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

ULTRASOUND-GUIDED QUADRATUS LUMBORUM BLOCK: AN EFFECTIVE METHOD FOR POSTOPERATIVE ANALGESIA IN OPEN PYELOPLASTY
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1Hospital of Cremona, Department of Anesthesia and Intensive Care Unit, Cremona, Italy, 2University of Chieti, Department of Anesthesia-Resuscitation-Intensive and Pain Care, L'Aquila, Italy, 3San Salvatore Academic Hospital, Department of Anesthesia and Intensive Care Unit, L'Aquila, Italy.

Background and Aims: Anderson-Hynes open pyeloplasty (AHP) is a surgical technique for the management of ureteropelvic junction obstruction (UPJO). In standard AHP, surgeon generally performs the opening of posterior abdominal wall and detaching of parirenal fat. The large muscle cutting incision is the major cause of significant postoperative pain. Recent evidences suggested that Quadratus lumborum block type I (US-QLB 1) could provide effective postoperative analgesia in urological surgery. To test this hypothesis, we described a 52 year old man, ASA 2, who underwent AHP for treatment of a left UPJO with severe hydronephrosis (grade IV).

Methods: After induction of anesthesia with the patient in a right lateral position, we performed US-QLB 1 by injecting 20 ml of 0.5% Ropivacaine plus Dexamethasone 4 mg through a 22 gauge 80 mm needle in the fascial plane between the posterior edge of the transversus abdominis muscle, the quadratus lumborum muscle (QLM) and the underlying transversalis fascia (TF). We ultrasonically confirmed the spread of local anesthetic (LA) over the anterolateral surface of QLM and downward displacement of the retropertitoneal fat. Before the end of surgery, 1 g of acetaminophen and Ketorolac 30 mg were intravenously administered.

Results: Patient remained hemodynamically stable throughout the procedure and reported a prolonged pain relief after surgery, without opioids needing. No discomfort and complications were recorded postoperatively.

Conclusions: This case report suggested that US-QLB 1, as part of a multimodal analgesic regimen, could provide long-lasting analgesia for AHP likely due to a predominant spread of LA deep to TF in the retroperitoneal posterior pararenal space.

ESRA-0298
E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

COMPARISON OF POSTOPERATIVE PAIN SCORES IN PATIENTS RECEIVING SPINAL VERSUS GENERAL ANAESTHESIA FOR PRIMARY TOTAL KNEE AND HIP REPLACEMENT
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The Princess Alexandra Hospital NHS Trust, Anaesthetic, Harlow, United Kingdom.

Background and Aims: In lower extremity joint replacement, the choice of anaesthetic technique to optimise postoperative pain relief is controversial and challenging. We compared the use of spinal anaesthesia (SA) with intrathecal diamorphine and general anaesthesia (GA) combined with Local Wound infiltration in Total knee replacement (TKR) and Total hip replacement (THR). Primary outcome measures included postoperative pain scores, time to mobilisation and time to discharge.

Methods: The audit included 24 patients, aged 23-82 years, scheduled for TKR and THR. Group A1 = TKR+SA, group A2 = TKR+GA, group B1 = THR+SA, group B2 = THR+GA. 3ml 0.5 % bupivacaine with 300 μm of diamorphine intrathecally was used for SA and sedation with propofol administrated by target control infusion. All procedures were performed by the same surgeon. Local wound infiltration (LWI) with levobupivacaine, morphine, and ketorolac was given to all patients. Postoperatively, patients received paracetamol and codeine 6 hourly and morphine orally as required. Pain was assessed by visual analogue score (VAS).

Results: Results are shown in Table 1.

<table>
<thead>
<tr>
<th>Group</th>
<th>Median (IQR)</th>
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<tbody>
<tr>
<td>A1</td>
<td>2 (2)</td>
</tr>
<tr>
<td>A2</td>
<td>2 (2)</td>
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<tr>
<td>B1</td>
<td>2 (2)</td>
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ESRA-0445
E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

EFFICACY OF ULTRASOUND GUIDED CONTINUOUS SERRATUS PLANE BLOCK AND DEXMEDETOMIDINE SEDATION FOR FACILITATING WEANING IN A CRITICAL CHEST TRAUMA PATIENT: A CASE REPORT.
Giordano C.1, Scimia P.2, Fusco P.1, Danzi V.1,2 A.S.S.T Cremona- Anaesthesia and Intensive Care Unit, Department of Anesthesia and Intensive Care, Cremona, Italy, 2A.S.S.T Cremona-Anaesthesia and Intensive Care Unit, Department of Anesthesia
A 39-year-old man was admitted to the Intensive Care Unit (ICU) after a thoracic trauma due to a road accident. He reported multiple right rib fractures from 4th to 8th with pneumothorax, severe respiratory failure and metabolic acidosis. After extubation, the patient presented paradoxical breathing and did not cough adequately with severe ribcage pain and a period of delirium, so we decided for rapid reintubation. Dexmedetomidine sedation (0.4 mcg/Kg/h) was started and a US-SPB was performed by injecting a total of 30 ml of 0.25% levobupivacaine between the serratus anterior and latissimus dorsi muscle (Figure 1), followed by a catheter placement in order to prolong analgesia.

The patient reported early tracheal extubation, reporting good gas exchange and a long lasting analgesia. No discomfort and other complication were recorded, resulting in a rapid recovery from the ICU.

Conclusions: This case report suggested that continuous US-SPB in addition to Dexmedetomidine sedation could provide adequate pain relief facilitating weaning in critical chest trauma patients.

ESRAB-0488 E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

COULD THE ULTRASOUND-GUIDED QUADRATUS LUMBARUM BLOCK TYPE 2 BE AN EFFECTIVE TECHNIQUE FOR POSTOPERATIVE ANALGESIA IN LAPAROSCOPIC SUURRENTECTOMY? A CASE REPORT.

Giordano C., Scimia P., Bassorici E., Harizaj F., Fusco P., Danzi V. 1
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Background and Aims: Recent evidences suggested that posterior approaches to the transversus abdominis plane (TAP) block may provide effective postoperative analgesia in laparoscopic abdominal surgery. The ultrasound-guided Quadratus lumbarum block type 2 (US-QLB 2) is a novel technique which could be an effective method for postoperative pain relief in these procedures. To test this hypothesis we performed US-QLB 2 in a patient underwent laparoscopic surrenrectomy.

Methods: A 62-year-old man, BMI 42 kg/m², ASA 3, was scheduled to undergo laparoscopic surrenrectomy for an aldosterone-producing adenoma, causing renal insufficiency and vascular damage subsequent to long-term uncontrolled hypertension. Written informed consent was obtained. After induction of general anaesthesia, with the patient in lateral position, we performed US-QLB 2 by injecting 20 ml of 0.5% Levobupivacaine in the fascial plane between the quadratus lumbarum and latissimus dorsi muscles. Before the end of surgery, 1 g of acetaminophen and Ketorolac 30 mg were intravenously administered.

Results: Intraoperative hemodynamic stability was obtained. In the first 24 hours after surgery, patient reported a prolonged pain relief. Only 3 g of acetaminophen and ketorolac 90 mg were administered, without opioids needing. No discomfort and complications were recorded postoperatively.

Conclusions: This case report suggested that US-QLB 2 could provide long-lasting analgesia improving visceral pain control, likely due to extension of local anesthetic into the paravertebral space. Further studies should be needed to confirm if this technique will be considered a safe and effective method for postoperative analgesia in laparoscopic surrenrectomy.

ESRAB-0208 E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

THE EFFECT OF PREOPERATIVE BILATERAL GREATER OCCIPITAL NERVE BLOCK ON NECK PAIN AND HEADACHE FOLLOWING THYROIDECTOMY

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Background and Aims: After thyroidectomy, many patients complain incisional headache and occipital headache. In this study, it was aimed to investigate the effects of preoperative bilateral GON blockade, postoperative incisional pain, occipital headache and neck pain, analgesic consumption.

Methods: One hundred patients who had undergone elective total thyroidectomy, aged 18-65 years and ASA score I-II who had not undergone bilateral GON blockade in preoperative period were evaluated retrospectively. Bilateral GON blockade with 2 ml of 0.5% bupivacaine was administered 30 minutes before anesthesia in the block group (Group B, n = 50). In the control group (Group K, n = 50) no block was applied. Standard postoperative pain treatment was applied to all patients postoperatively. Postoperative pain severity (VAS) at 3, 12, 24, 36 and 48 hours, with resting and moving, in 3 different regions including the incision site, head and neck. Additional analgesic requirement, side effects and patient satisfaction were recorded.

Results: There was no significant difference between groups in terms of age, sex, height, weight, ASA score, time of anesthesia and duration of operation. Postoperative pain and VAS scores at postoperative 12, 24, 36 and 48 hours were significantly lower in the block group compared to the control group (p <0.05). Postoperative analgesic consumption was significantly lower in the block group (p <0.05).

Conclusions: We conclude that bilateral GON blockade with preoperative 0.5% bupivacaine is a highly effective method of decreasing neck and occipital headache after thyroidectomy, reducing additional analgesic consumption, having a low side effect profile and high patient satisfaction.

ESRAB-0486 E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

SILENT SURGERY - LISTENING TO MUSIC ON HEADPHONES DURING OPERATIONS UNDER REGIONAL ANAESTHESIA

Harris C., Bottomley T., Kamming D. University College Hospital London, Anaesthesia, London, United Kingdom.

Background and Aims: Our regional anaesthesia “Block Room” service at UCLH offers a relaxed area for our patients to have their nerve block placed and to wait before being taken to the operating room. We have gathered patient
feedback assessing the level of anxiety associated with receiving regional anaesthesia. Fifty percent of responders who received a block in our block room reported being “anxious” or “very anxious” whilst awaiting their surgery. Anxiety is often the reason that patients request sedation or general anaesthesia in addition to their regional anaesthesia.

A meta-analysis published in the Lancet in 2015 showed that patients who listen to music of their choosing before, during and after surgery have a reduction in both anxiety and pain.

Methods: The UCLH charity enabled us to procure some noise cancelling headphones and patients are now offered headphones to listen to their choice of music, both while in the block room having their regional anaesthesia and also during their surgery.

Results: After this intervention we found that in patients who received headphones the average anxiety score dropped on a visual analogue scale. All patients who received headphones found the environment in which they received their regional anaesthesia either relaxing or very relaxing. While out of those who didn’t 10% found the environment stressful or very stressful.

Conclusions: To us it seems that offering our patients music during regional anaesthesia, in order to cancel out the sounds of surgery, is a simple, cheap and effective intervention that can reduce anxiety and improve patient satisfaction.

ESRA-0494
E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

ADDUCTOR CANAL BLOCK FOR TOTAL KNEE ARTHROPLASTY: EFFICACY OF POST OPERATIVE ANALGESIA

Hodge S., Perello T. Brighton and Sussex University Hospitals, Anaesthetics, Brighton, United Kingdom.

Background and Aims: Total knee arthroplasty (TKA) is a notoriously painful procedure, with post-operative pain delaying discharge from hospital. The increasing demand for TKA and the decreasing supply of inpatient hospital beds provides a unique challenge for anaesthetists to find the optimal analgesic regime for this procedure. Aductor canal blocks provide analgesia to the knee without the quadriceps weakness of a femoral nerve block. We aimed to assess whether aductor canal blocks provided superior post-operative recovery compared to a spinal only technique.

Methods: Data regarding anaesthetic technique, post-operative analgesia, pain scores, mobilisation and length of stay was collected retrospectively from notes of 29 patients who had undergone TKA between January 2016 and July 2017 at The Montefiore Hospital, Hove. Patients were grouped by the anaesthetic technique used ("spinal only" or "spinal plus adductor canal block") for comparison.

Results: Pain scores were extremely low in both groups, but additional (PRN) analgesia was required in 38% of those with ACB and 56% of those without. All patients mobilised within 24 hours of surgery, but 2 (14%) of the "spinal only" patients suffered pain on mobilisation compared to none of the patients with ACB. One patient in the ACB group was noted to have foot drop on initial mobilisation. By post-operative day 3, 92% of patients with ACB and 56% of those with spinal only had been discharged home.

Conclusions: The addition of ACB to spinal anaesthesia for TKA appeared to decrease postoperative analgesic requirements, decrease pain on mobilisation and decrease length of stay in our cohort.

ESRA-0438
E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

ADDING DEXMEDETOMIDINE TO BUPIVACAINE FOR POST-LAPAROTOMY PAIN

Imani F., Rahimzadeh P., Faiz S.H.R., Ireland University of Medical Sciences, Pain Research Center-Anesthesiology and Pain Medicine, Tehran, Iran. Background and Aims: One of the Postoperative pain management after laparotomy is paravertebral block. Adding some adjuvants, including alpha agonists to local anesthetics, has shown more pain relief and increased duration of analgesia in some studies. The aim of this study is to examine the effect of adding dexmedetomidine to bupivacaïne for paravertebral blocks in laparotomy.

Methods: Forty two patients who were scheduled for thoracic paravertebral blockade for analgesia after laparotomy were enrolled in the study. The patients were randomly allocated to group BD (bupivacaine 20 mL plus dexmedetomidine 100 µg) and the second group B (bupivacaine 20 mL) was used. After block, fentanyl-containing patient controlled intravenous analgesia was prescribed. Pain score (NRS), sedation score, total analgesic consumption, the time of first analgesic requirement, side-effects including nausea and vomiting, Anti-emetic drug, respiratory depression and patients’ satisfaction during the first 48 hours of evaluation were compared in the two groups.

Results: The pain score was significantly lower in BD group (P<0.003). Sedation score was lower in BD group without significant difference (P=0.54). The mean total analgesic consumption at the first 48 hours was significantly lower in BD group (P <0.001). The time of first analgesic requirement was significantly longer in dexmedetomidine group (P=0.001). Side-effects (including nausea, vomiting and respiratory depression) did not differ significantly between the two groups.

Conclusions: Adding dexmedetomidine to bupivacaine for thoracic paravertebral blockade after laparotomy causes better pain relief after surgery.

ESRA-0047
E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

COMPARISON OF ULTRASOUND-GUIDED FEMORAL NERVE BLOCK IMPLEMENTATION AND COMBINED SPINAL EPIDURAL ANESTHESIA IN TOTAL KNEE ARTHROPLASTY

Cichecki F.1, Yildirim A.1, Oral I.O.1, Erkokcu O.F.1, Kara L.1, 1Selcuk University Medical Faculty, Anesthesiology, konya, Turkey, 2Selcuk University Medical Faculty, Orthopaedic and Traumatology, konya, Turkey. Background and Aims: Total knee arthroplasty (TKA) is considered an effective surgery for late-stage knee osteoarthritis or rheumatoid arthritis. Several anesthetic regimens and techniques have been investigated to reduce postoperative
pain and to increase rapid healing after TKA. The objective of this research was to compare postoperative early stage (48 hours) visual analogue scores (VAS) following combined spinal epidural anesthesia (CSEA) and ultrasound-guided femoral nerve block (FNB) in patients undergoing total knee arthroplasty (TKA).

Methods: This was a retrospective study. The subjects included 302 patients who underwent CSEA (Group CSEA) and FNB (Group FNB) for elective unilateral total knee arthroplasty between May 2016 and May 2017. The total amount of morphine consumed and the complications that arose (30th min, 2, 6, 12, 24 and 48th hours) were evaluated using postoperative visual pain scale (VAS) scores at rest and during activity by patient controlled analgesia (PCA) devices.

Results: The demographic characteristics of the patients were similar (p>0.05). There was no statistically significant difference between the two groups in terms of postoperative complications.

Conclusions: Pain levels after total knee arthroplasty showed that FNB had a similar effect to CSEA in providing pain relief, but FNB was superior to CSEA in terms of postoperative complications.

Background and Aims: To compare the sufficient of postoperative pain effects of ultrasound-guided infracavicular block and general anesthesia in patients with humerus fracture undergoing upper extremity surgery.

Methods: The study was planned as a retrospective study. Forty two patients who underwent humerus fracture surgery between July 2016 and July 2017, with either general anesthesia (GA, n=19) or ultrasound-guided infracavicular block (ICB, n=23) were included in the study. Postoperative visual analogue scale (VAS) pain scores at rest and during activity at 30th min, 2, 6, 12 and 24th hours, the total amount of morphine consumed, the first analgesia requirement time were evaluated by postoperative patient controlled analgesia (PCA) devices.

Results: The demographic characteristics of the patients were similar (p=0.05). The VAS scores at rest and during activity and total amount of consumed morphine were lower in the ICB group in the first 12 hours than in the GA group (p<0.001). Total amount of consumed morphine were lower, and the first analgesia requirement time were much more in the ICB group than in the GA group (p=0.001). But, there was no significant difference in complications between the two groups (p=0.05).

Conclusions: Ultrasound-guided infracavicular block could be a positive option for both sufficient of postoperative analgesia compared with GA in patients with humerus fracture undergoing upper extremity surgery.
Background and Aims: Optimal perioperative pain management requires both efficacy and a low rate of adverse events (AEs). Sufentanil Sublingual Tablet System (SSTS) is a handheld PCA device that delivers a fixed dose of 15 mcg sufentanil tablets on a PRN basis. Previously, we reported the successful use of SSTS for postoperative pain control after TAH. However, intraoperatively, we used opioids other than sufentanil. Now we assess the analgesic efficacy and tolerability of sufentanil as the sole opioid for treatment of intra- and postoperative pain in patients undergoing TAH.

Methods: After ethical committee approval we performed an observational case series on 14 patients who underwent TAH under general anesthesia, between October 2017 and April 2018. Sufentanil 0.10-0.20 ng/ml effect-site concentration was used in induction and maintenance of balanced general anesthesia. PONV prophylaxis was implemented with dexamethasone 4 mg, droperidol 0.625 mg and ondansetron 4 mg. Postoperative pain was managed by the exclusive use of SSTS. Efficacy of SSTS was assessed by patient reports of pain intensity on an 11-point numerical rating scale (NRS). Safety assessments included vital signs, and AEs.

Results: Average patient age was 53 years, BMI was 27.1. Median NRS was 1 (range 0-2) at rest, and 2 (range 1-3) during movement. Mean number of doses was 18 over 72 hours, with interdosing intervals of 172 minutes. No desaturation (SpO2 < 92%) was found. No AEs, including PONV occurred.

Conclusions: Intra- and postoperative pain for TAH has been treated effectively and safely with sufentanil as the sole opioid. Interestingly, no PONV has been recorded.

ESRAB-0476
E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

DEVELOPMENT OF A PAIN MANAGEMENT PATHWAY FOR ADULTS WITH COMPLEX ACETABULAR & PELVIC TRAUMA, A QUALITY IMPROVEMENT PROJECT IN A MAJOR TRAUMA CENTRE IN LONDON

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Background and Aims: Evidence suggests that good acute pain management in major trauma improves outcome and the converse is also true. Up to 80% of patients will develop chronic pain, which can be prevented by early analgesic intervention in the acute phase; this is true for both surgical and conservative management.

Opioid side-effects will affect the quality of patient experience and should be avoided where possible.

Regional anaesthesia offers significant benefit to polytrauma patients including reduction of opioid consumption and associated side-effects. The regional block of choice at our institution is Quadratus Lumborum Block (QLB); neuraxial blocks are avoided to allow examination and monitoring of perineal sensation immediately postoperatively.

Methods: We standardised analgesic management based on latest evidence and reviewed audit data in order to formulate a multidisciplinary care pathway. The final pathway was produced over several developmental meetings with surgeons, anaesthetists (trauma & pain specialists with acute pain team), physiotherapists and specialist nurses.

Regional anaesthesia offers significant benefit to polytrauma patients including reduction of opioid consumption and associated side-effects. The regional block of choice at our institution is Quadratus Lumborum Block (QLB); neuraxial blocks are avoided to allow examination and monitoring of perineal sensation immediately postoperatively.
The pathway was made as a checklist. Processes are ticked when completed which avoids overlooking certain steps in the pathway.

**Results:** Our pathway is outlined in Figure 1.

**Conclusions:** NICE (National Institute for Health & Clinical Excellence) guidance for pelvic fractures was published in February 2016. It doesn’t specify analgesic regimes in details nor did it extend to beyond the admission period. This work is novel, as it encompasses the pain management through admission, discharge and follow-up. During follow-up, patients with chronic pain will be identified and managed appropriately. This pathway is currently being used and we anticipate that it will be audited the following spring.

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**ESRA#-0230**

**E-POSTER VIEWING**

**POSTOPERATIVE PAIN MANAGEMENT**

**TRANSVERSUS ABDOMINIS PLANE BLOCK VERSUS EPIDURAL MORPHINE IN POST-CAESAREAN ANALGESIC MANAGEMENT. A RETROSPECTIVE STUDY**

Margarit Estragüés N1, Mestres González G2, Pérez Poquet M1, Cebrian Moreno A1, Gasca Pera S1, Marín Moya M1, Jaen Manzanares A1, Pérez Torrents C1, Hospital Universitari Mutua Terrassa, Anaesthesiology, Terrassa, Spain.

**Background and Aims:** Ultrasound-guided transversus abdominis plane (TAP) block and epidural morphine after caesarean section (CS) are performed for providing pain relief after CS. No comparative studies are described. We aim to determine differences in analgesic effect between both techniques.

**Methods:** We included retrospectively all CS performed between August 2017 and March 2018 in our centre. Of 167 patients that fulfilled inclusion criteria 85 were assigned to T group (TAP block of elective CS) and 82 to M group (epidural morphine of non-elective CS). We collected variables from clinical records. The primary outcome was pain evaluated with the visual analogue scale (VAS) from 0 to 10. It was registered at post-anaesthesia care unit (PACU) and 4, 8, 12, 24 hours postoperative. We considered pain if VAS was greater than 3. Secondary outcome was the need of rescue intravenous analgesia in the first 24 h after CS.

**Results:** Pain scores were not statistically significant between the T group and the M group at the PACU and at 24 hours postoperative, but pain was lower in the M group at 4, 8 and 12 hours postoperative (4h: 6.1% versus 30.6% p<0.0001), (8h: 3.7% versus 14.1% p<0.002) and (12h: 0% versus 10.6% p<0.003). Moreover, mean number of analgesia request doses received between 0 and 24h was lower in M group (0.5±0.07) versus T group (1.1±0.12).

**Conclusions:** Epidural morphine was more effective than TAP block after CS between 4-12h postoperative. When an epidural catheter is placed in a CS, epidural morphine provides superior analgesia than a TAP block performs.

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**ESRA#-0290**

**E-POSTER VIEWING**

**POSTOPERATIVE PAIN MANAGEMENT**

**TRANSVERSUS ABDOMINIS PLANE BLOCK FOR POST-CAESAREAN PAIN: A RETROSPECTIVE STUDY**

Marín Moya M1, Cebrian Moreno A1, Mestres González G2, Pérez Poquet M1, Margarit Estragüés N1, Gasca Pera S1, Jaen Manzanares A1, Pérez Torrents C1, Hospital Universitari Mutua Terrassa, Anaesthesiology, Terrassa, Spain.

**Background and Aims:** Ultrasound-guided transversus abdominis plane (TAP) block is a method for providing analgesia after caesarean delivery. The aim of our study is to describe the pain relief in patients in which this regional technique is added to conventional analgesia.

**Methods:** In this retrospective study we included 122 pregnant women who had an elective caesarean section (CS) between 2017 and March 2018 in our centre. Patients were placed in two groups: T or TAP block group (n=85) and C or control group (n=37). Primary outcome was pain, evaluated with the visual analogue scale (VAS) from 0 to 10. Pain was considered when VAS was greater than 3. It was registered at post-anaesthesia care unit (PACU) and at 4, 8, 12 hours post CS. A number of intravenous analgesia requests in the first 24h after CS were also reported.

**Results:** Pain scores at PACU, 4h, 8h and 12h were not statistically significant between both groups. Observed pain in PACU was 17.9% (15/85) in T group versus 32.4% (12/37) in C group (p = 0.07). Median (interquartile range 25%-75%) number of analgesia request doses received between 0 and 24h was lower in T group: 1 (0-2) versus C group: 2 (1-2).

**Conclusions:** We conclude that performing a TAP block in CS decreases the need of intravenous rescue the first 24h. A tendency (close to significant) to the reduction of postoperative pain was observed. It would be necessary more studies with a prospective clinical trial design in order to achieve a better assessment of its efficacy.

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**ESRA#-0388**

**E-POSTER VIEWING**

**POSTOPERATIVE PAIN MANAGEMENT**

**RECTOR SPINAE PLANE (ESP) CATHETERS FOR MAJOR HEPATOBILIARY SURGERY- A CASE SERIES**

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**Background and Aims:** Upper abdominal surgery is associated with significant postoperative pain which, if not managed adequately, may delay recovery and increase morbidity. ESP block is a new interfascial plane block described by Forero et al in 2016. Our aim was to evaluate ESP catheters in major hepatobiliary surgery and their effect on post-operative pain scores, postoperative opiate requirements and postoperative nausea and vomiting (PONV).

**Methods:** We followed up 7 patients who underwent liver resection or Whipple’s procedure and recorded age, sex, ASA class, intraoperative analgesia, postoperative pain scores, PONV and postoperative analgesia requirements. All patients received:

- 8-10 mcg/kg intrathecal morphine pre-induction
- ESP catheters placed pre-induction at T7 (20 mL bolus of 0.25% bupivacaine and infusion of 0.15% bupivacaine @10 mL/hr for 5 days)
- Fentanyl bolus intraoperatively and for first 12 hours postoperatively
- Paracetamol & Dextropropofen if no contraindications
- Opioids for breakthrough pain Day 1-5 postoperatively (sc OxyNorm or Morphine PCA)

**Results:** Mean age was 67.3 with 4 females and 3 males. All were ASA 2 or 3. 2 patients had pain scores of 0 both at rest and on movement up to Day 5 postoperatively and had no supplementary opiates at all. A further 4 patients had a mean of 6.75mg of oxymorphone sc on Day 1-5 with pain scores 0-4. One patient was considered an ESP catheter failure with 24mg/day PCA morphine on Day 1-4. 1 of the 7 patients had PONV.

**Conclusions:** ESP catheters show great promise in major hepatobiliary surgery.

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**ESRA#-0271**

**E-POSTER VIEWING**

**POSTOPERATIVE PAIN MANAGEMENT**

**INTERSCALENE BLOCK VS SUPRASCAPULAR BLOCK FOR SHOULDER ARTHROSCOPY- A META-ANALYSIS**

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**Background and Aims:** Shoulder arthroscopy is among the most commonly performed orthopaedic procedures. However, postoperative pain can result in increased morbidity, opioid consumption and decreased patient satisfaction. This study is a meta-analysis of the prospective cohort studies (PCS) in the literature to ascertain if interscalene block (ISB) or suprascapular block (SSB) for shoulder arthroscopy result in superior clinical outcomes. Our hypothesis was that ISB would result in decreased patient pain, and opioid consumption.

**Methods:** A literature search was carried out according to the PRISMA guidelines. PCS comparing ISB and SSB were included. The outcomes measured were pain (VAS score), opioid consumption, complications and patient satisfaction.

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Statistical analysis was performed using Review Manager. A p-value of < 0.05 was considered statistically significant.

**Results:** Seven clinical trials were identified with 374 patients. In the immediate postoperative period in the PACU, there was a significantly lower pain score with ISB (P = 0.01). However, at 12 and 24 hours there was no significant difference between ISB and SSB (p = 0.08, and p = 0.64, respectively). There was significantly less opioid consumption in the first 24 hours with ISB (p = 0.02). There was no difference in the rate of complications or level of patient satisfaction between ISB and SSB (p > 0.05 for both).

**Conclusions:** ISB resulted in decreased pain levels in the immediate postoperative period and opioid consumption over the first 24 hours. There was no difference in the rate of complications or patient satisfaction between the two techniques.

**ESRA8-0274**

**E-POSTER VIEWING**

**POSTOPERATIVE PAIN MANAGEMENT**

**CONTINUOUS VERSUS SINGLE-INJECTION FEMORAL NERVE BLOCK FOR TOTAL KNEE ARTHROPLASTY: A META-ANALYSIS OF RANDOMIZED CONTROL TRIALS**

Maye A.1, Hurley E.1,2, Moran C.2, Curley G.1,2 Royal College of Surgeons in Ireland, Anaesthesia, Dublin, Ireland, 2Sports Surgery Clinic, Orthopaedics and Sports Medicine, Dublin, Ireland.

**Background and Aims:** Total knee arthroplasty is among the most commonly performed orthopaedic procedures. However, postoperative knee pain can result in increased morbidity, hospital stay and decreased patient satisfaction. This study is a meta-analysis of the randomized control trials (RCTs) in the literature to ascertain if continuous (cFNB) or single-injection (sFNB) femoral nerve block for total knee arthroplasty result in superior clinical outcomes. Our hypothesis was that cFNB would result in decreased patient pain, opioid consumption and hospital stay.

**Methods:** A literature search was carried out according to the PRISMA guidelines. RCTs comparing the cFNB and sFNB were included. The outcomes measured were pain (VAS score), opioid consumption, and length of stay. Statistical analysis was performed using Review Manager. A p-value of < 0.05 was considered statistically significant.

**Results:** Eight RCTs were identified with 616 patients. At 24 hours at rest and on movement there was a significant difference in pain levels in favour of cFNB (p = 0.01, p < 0.0001, respectively). At 48 hours at rest and on movement there was a significant difference in pain in favour of cFNB (p = 0.01, p = 0.02, respectively). There was a significantly less opioid consumption in the first 24 hours with cFNB (p = 0.009). There was no difference in the length of hospital stay between cFNB and sFNB (p = 0.94)

**Conclusions:** cFNB resulted in decreased pain levels and opioid consumption compared to sFNB following total knee arthroplasty. There was no significant difference in hospital stay.

**ESRA8-0129**

**E-POSTER VIEWING**

**POSTOPERATIVE PAIN MANAGEMENT**

**QUALITY IMPROVEMENT PROJECT IN POST-LAPAROTOMY PAIN AND ANALGESIC STRATEGIES**

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**Background and Aims:** The quality improvement project (QIP) examined the post-laparotomy pain endured by patients, and the analgesic strategies anaesthetists at New Cross Hospital employed to minimise this feature of a major surgical procedure. In this QIP, 32 cases were reviewed, of which 18 were emergencies and 14 were elective cases.

**Methods:** Six analgesic strategies were employed for post-laparotomy analgesia: Epidural anaesthesia, Spinal anaesthesia, Transverse Abdominis Plane (TAP) blocks, Rectus sheath catheters, skin infiltration and Patient Controlled Analgesia (PCA) only. The table below details the number of the cases each strategy was utilised:
Results: The results highlight a distinct benefit in using an analgesic strategy in addition to the use of PCA, compared to the sole use of PCA alone. However, the QIP revealed an inherent limitation to the use of these strategies: Epidurals require care and when lost, expose the patient to a sudden non-analgesic state. Spinals, even with the addition of Diamorphine to prolong analgesia, have a limited time effectiveness due to metabolism and wearing off – the results was noted to be the same - a delayed onset of moderate to severe pain, to which the PCA (from this QIP) does not appear to adequately address.

Conclusions: The QIP evidences that multimodal analgesic strategies we offer provide between short and intermediate term analgesia. Pain still predominates after 24 hours, hence the increase in pain scores and morphine consumption; therefore, longer term/continuous analgesic strategy is required. We hope the QIP provides information to future QIPs to study the effectiveness of other analgesic strategies.

ESRA8-0425
E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

COMPARISON OF POSTOPERATIVE ANALGESIA IN PATIENTS UNDERGOING ILIOESTOMY CLOSURE WITH AND WITHOUT DUAL TRANSVERSUS ABDOMINIS PLANE (TAP) BLOCK—A RANDOMIZED CONTROLLED TRIAL

Nair A., Enagandula V., Naik V., Rayani B. Consultant Anesthesiologist Basavatarakam Indo-American Cancer Hospital and Research Institute, Department of Anesthesiology, Hyderabad, India.

Background and Aims: We studied 119 patients, 61 from group A and 58 from group B. The purpose of enhanced recovery in orthopaedics and the anesthetic technique may be of influence. This study aims to review the patients who underwent a total knee arthroplasty during two different time periods in our hospital.

Methods: We performed a retrospective analysis of the electronic health record of the patients who had a total knee arthroplasty in 2013/2014 (group A) and from September 2017 to April 2018 (group B). The statistical analysis was done with SPSS (version 23).

Conclusions: Patients in group A had more early postoperative days, hence the increase in pain scores and morphine consumption; therefore, longer term/continuous analgesic strategy is required. We hope the QIP provides information to future QIPs to study the effectiveness of other analgesic strategies.

ESRA8-0482
E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

DOES ANESTHETIC TECHNIQUE INFLUENCE FUNCTIONAL RECOVERY AFTER TOTAL KNEE ARTHROPLASTY?

Carrão A., Ribeiro D., O’Neill P., Duarte F., Ghira M. Hospital Beatriz Ângelo Loures-Portugal, Anesthesiology Department, Loures, Portugal.

Background and Aims: Faster functional recovery after surgery is the purpose of enhanced recovery in orthopaedics and the anesthetic technique may be of influence. This study aims to review the patients who underwent a total knee arthroplasty during two different time periods in our hospital.

Methods: We performed a retrospective analysis of the electronic health record of the patients who had a total knee arthroplasty in 2013/2014 (group A) and from September 2017 to April 2018 (group B). The statistical analysis was done with SPSS (version 23).

Results: We studied 119 patients, 61 from group A and 58 from group B. Patients characteristics were similar in the two groups. Both intraoperative anaesthetic technique and postoperative regional analgesia were significantly different between the two groups (p-value < 0.001). Patients in group A had mostly a combined spinal-epidural anesthesia or a subarachnoid combined with single-shot femoral block while those in group B received a subarachnoid block and a continuous femoral block (Table 1). Regarding functional recovery, patients in group B were capable of a higher knee flexion angle in the immediate post-operative period and this finding reached statistical significance in postoperative days 2 and 3 (p-value 0.004 and 0.040, respectively). Time to discharge was not statistically different (Table 2).

Table 1 – Anesthesia Technique

<table>
<thead>
<tr>
<th>Group</th>
<th>General anesthesia (%)</th>
<th>Subarachnoid block (%)</th>
<th>Combined spinal-epidural anesthesia (%)</th>
<th>Postoperative analgesia with peripheral nerve block (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td>5 (8.2%)</td>
<td>26 (42.6%)</td>
<td>30 (49.2%)</td>
<td>14 (22.3%)</td>
</tr>
<tr>
<td>Group B</td>
<td>6 (10.3%)</td>
<td>52 (89.7%)</td>
<td>0 (%)</td>
<td>1 (1.7%)</td>
</tr>
</tbody>
</table>

Table 2 – Postoperative functional recovery

<table>
<thead>
<tr>
<th>Group</th>
<th>Knee flexion angle after surgery (°)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td>Postoperative day 1</td>
<td>38 ± 20</td>
</tr>
<tr>
<td>Group B</td>
<td>Postoperative day 2</td>
<td>60 ± 18</td>
</tr>
<tr>
<td>Group A</td>
<td>Postoperative day 3</td>
<td>72 ± 18</td>
</tr>
<tr>
<td>Group B</td>
<td>Postoperative day 4</td>
<td>70 ± 18</td>
</tr>
<tr>
<td>Group A</td>
<td>Time to discharge (median, h)</td>
<td>4 (1)</td>
</tr>
</tbody>
</table>

ESRA8-0262
E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

THE EFFECTS OF PREOPERATIVE SINGLE DOSE PREGABALIN ON POSTOPERATIVE PAIN IN VIDEOASSISTED THORACOSCOPIC SURGERY: A RANDOMIZED, DOUBLE BLIND, PLA-CEBO CONTROLLED STUDY

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Background and Aims: Pain after video-assisted thoracoscopic surgery (VATS) is common. Multiple randomized trials show the preoperative use of Pregabalin reduced postoperative requirement of opioids. However, the clinical efficacy for the patients undergoing VATS is still unknown. We therefore tested the hypothesis that preoperative oral single dose of Pregabalin reduces postoperative pain and opioid requirement after VATS.

Methods: In this double-blind trial, 59 patients having elective VATS were randomly allocated to receive either 150 mg of Pregabalin (P group; 30 patients) or placebo (P group; 29 patients) two hours before surgery. Postoperative pain scores on a 0-10 visual analogue scale (VAS) were measured at 2, 6,12 and 24 hours after surgery. Morphine consumption at 2, 6, 12 and 24 hours for each patient was recorded. Differences in pain score and morphine consumption between groups were analyzed using Fisher exact test, T-test.

Results: The mean VAS in Pregabalin group was significantly lower than the placebo group at 2 hours (5.2±2.2and 6.9±1.5, P=0.002) and 24 hours (2.8 ±1.4and 4.5±2.2, P=0.001) but no significant difference at 6 and 12hours after surgery.

Conclusions: 150 mg preoperative single oral dose of Pregabalin reduces postoperative pain and morphine consumption in patients undergoing VATS. Significant side effects were not observed.
Conclusions: Anesthetic technique for total knee arthroplasty has changed in our hospital, from a combined spinal-epidural anesthesia to a subarachnoid block followed by a continuous femoral block. Functional recovery, as shown by active knee flexion angle, has improved and this may be the result of a different anesthetic approach.

ESRA-0286
E-POSTER VIEWING
POSTOPERATIVE PAIN MANAGEMENT
THE EFFECT OF PREEMPTIVE GABAPENTIN ON POSTOPERATIVE PAIN AND OPIOID REQUIREMENT FOLLOWING SURGERIES IN THE ANTERIOR PART OF THE NECK
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Background and Aims: Our aim was to evaluate the effect of pre-emptive gabapentin on postoperative pain and opioid requirement following surgeries in the neck area. To observe for the change in heart rate and blood pressure following surgery for 24 hrs postoperatively. To observe for the incidence of nausea and vomiting.

Methods: Patients were randomly allocated into two groups of 30 each. Group C received B-complex capsule orally as placebo 2 hours prior to surgery and Group B received gabapentin 300 mg orally 2 hours before surgery. In the Post-operative period, Pethidine 1 mg/kg slow IV was given if pain score was 4 or more. Adverse effects in the form of nausea and vomiting were documented. Statistical analysis of all the quantitative data was done by using the Student’s unpaired t-test (qualitative data was done by using the ‘Chi (χ) 2’ test (e.g., gender, nausea, vomiting). Inter-group comparison of pethidine requirement was done using Mann-Whitney U test.

Results: Patients in the gabapentin group had significantly lowerVAS scores and pethidine requirement at all-time intervals Total pethidine requirement after surgery in the first 24 hours in the gabapentin group was (47±23.51) when compared to control group (163.17±39.72) (p=0.001), which was statistically significant. Patients in gabapentin group had better haemodynamics.

Conclusions: Gabapentin 300 mg given orally 2 hours prior to surgeries in the neck effectively reduced postoperative pain and opioid requirement in the first 24 hours postoperatively with better haemodynamics. Thus 300 mg of gabapentin can be safely used pre-emptively in patients undergoing elective surgeries, significantly reducing opioid requirement.

ESRA-0061
E-POSTER VIEWING
POSTOPERATIVE PAIN MANAGEMENT
EVALUATION OF PREGABALIN ADMINISTRATION PERIOPERATIVELY IN PAIN MANAGEMENT OF PATIENTS UNDERGOING HIP ARTHROPLASTY

Background and Aims: The goal of this study was to evaluate postoperative pain using pregabalin in patients undergoing hip arthroplasty.

Methods: Fifty-six patients, scheduled to total hip replacement, were studied. Patients were assigned into two groups (group A: 28 patients (8 male, 13 female) who were receiving pregabalin (100-300 mg per os) for at least two months preoperatively in a regular basis for their pain management, due to hip osteoarthritis, and group B (control): 28 patients (13 male, 15 female), of similar age and weight of group A who were receiving conventional painkillers for their condition preoperatively. In both groups’ patients postoperatively the same analgesic protocol was applied: paracetamol 1 gr IV x 4, parecoxib 40mg x 2, and tramadol 50mg IV pm. Group A patients continued their pregabalin consumption, as preoperatively. Pain scores every 12 hrs during day of surgery and 3 first postoperative days, tramadol consumption in both groups and complications or side effects, were recorded.

Results: Pain according to 1-10 VAS scale was lower (p<0.001) in group A patients at all times of measurement (1.8±0.6 vs 3.6±0.8, 1.6±0.3 vs 2.9±0.3, 1.9±0.4 vs 2.5±0.4, 1.3±0.1 vs 1.9±0.7, 0.6±0.1 vs 1.4±0.6, 0.7±0.2 vs 1.1±0.2, 0.3±0.03 vs 0.8±0.05, and 0.4±0.01 vs 0.7±0.1 respectively). Mean tramadol consumption was lower in group A patients on studied days (100±22 vs 250±88, 150±35 vs 300±42, 50±23 vs 250±49, and 0 vs 200±21 mg/day, on every day studied respectively - p<0.001). No side effects were observed in any time of study.

Conclusions: Pregabalin perioperatively seems to reduce pain and opioid administration.
Results: The NRS of postoperative pain was significantly lower in the nefopam than in the control group at postoperative 4h (3.9 ± 2.1 vs 2.5 ± 1.4, P = 0.07) and in post anaesthetic care unit reduced use of rescue analgesic drugs (35 ± 22 vs 24.5 ± 14.5, P = 0.02).

Conclusions: Preventive nefopam was helpful in reducing the acute postoperative pain, with reduced use of rescue analgesic drugs.

ESRA-0414

POSTOPERATIVE PAIN MANAGEMENT

A COMPREHENSIVE PERIOPERATIVE REGIONAL ANESTHESIA AND ACUTE PATHWAY IS ASSOCIATED WITH ENHANCED RECOVERY AFTER OUTPATIENT ANTERIOR CRUCIATE LIGAMENT RECONSTRUCTION SURGERY

Patzkowski M.1, Highland K.2, Patzkowski J.3, 1Tripler Army Medical Center, Anesthesiology, Honolulu, USA, 2Uniformed Services University, Defense & Veterans Center for Integrative Pain Management, Bethesda, MD, USA.

Background and Aims: Outpatient anterior cruciate ligament reconstruction (ALCR) surgery is one of the most common sports orthopedics procedures performed in the world. We sought to determine if a comprehensive regional anesthesia and acute pain pathway (RAAPP) was associated with improved patient outcomes prior to discharge.

Methods: Retrospective data of all outpatient primary ALCR cases in our facility (N=103) from June - November 2017 were divided into Pre-(n=55) and Post-(n=48) RAAPP groups. Bivariate tests assessed group differences in demographic and clinical factors. Generalized linear models (GLMs) examined effect of group on highest post-surgical NRS pain scores, post-anesthesia care unit recovery time, and opioid utilization [morphine-equivalence dose (MED)] from surgery through discharge, while controlling for relevant covariates. Significance level was adjusted for three outcomes at p<.017.

Results: Post-RAAPP (94%) had higher percentage of military service members than Pre-RAAPP (71%, p<.01). Surgical variables were similar except for increased surgical time, preoperative acetaminophen, gabapentin, celecoxib, and intrathecal deca-methasone in the Post-RAAPP (all p<.05). GLMs controlled for military status and surgical time. Highest NRS scores [3.38 (95%CI 2.64, 4.11) vs. 6.38 (95% CI 5.60, 7.16)], post-anesthesia care unit recovery time [71 minutes (95%CI 61, 80) vs. 100 minutes (95%CI 89,110)], and opioid utilization [20.09 MED (95% CI 16.26, 23.91) vs. 42.74 MED (95% CI 38.69, 46.80)] were significantly lower in the Post-RAAPP than Pre-RAAPP, respectively (all p<.001).

Conclusions: Increased utilization of preoperative regional anesthesia and non-opioid analgesics in ALCR were significantly associated with reduced pain scores, early recovery times, and opioid usage prior to discharge.
Results: Parecoxib had a favourable benefit/risk profile compared with the other analgesics and placebo (Figure 2), scoring highest on the favourable effects of pain relief and opioid sparing, and also performing well on respiratory depression, psychomimetic effects, agranulocytosis, overdose toxicity, serious gastrointestinal effects, hepatic effects, itching, and nausea/vomiting. Diclofenac and ketorolac performed well on pain relief and duration of action, but performed worse on unfavourable effects. Sensitivity analyses confirmed that results remained relatively unchanged even with significant changes in weights or published evidence.

Conclusions: Parecoxib had the most favourable benefit/risk profile, followed by diclofenac and ketorolac. This model may aid clinicians when choosing the most appropriate analgesic for postoperative pain, and allow multiple sub-analyses to understand the impact of each effect on the overall benefit/risk profile.

Results: We found an average pain of 3, 4 (SD: 1.8). Chronic pain incidence: 16% one month after surgery. No complications for analgesic technique. There were no significant differences between groups. Serratus-intercostal group is younger.

Conclusions: Serratus-intercostal block is a useful analgesic technique to breast surgery.

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Conclusions: Paravertebral block is a relatively safe technique which is considered the ‘gold standard’ in patients undergoing thoracic and breast surgeries. It provides an excellent alternative to neuraxial techniques and considerably decreases the opioid consumption.

Results: One hundred patients had received paravertebral block for various procedures. Ninety percent of these were for breast surgeries. The other surgeries for which PVB was given included radical nephrectomy, thoracotomy as well as pectoralis major myocutaneous flap reconstruction in a patient with oral malignancy. The technique was performed using landmarks approach in 36 patients. The preferred technique was lateral paravertebral block. The block was performed in sitting position in 38 patients and lateral position in 62 patients. 45 patients received the block intraoperatively. The single injection technique was employed in 10% of patients. Catheter insertion was done in 30% of patients. The complications observed included wrong side technique (n=2), inadvertent spinal block (n=2). Thus the overall complication rate was 4% which is almost comparable with previous studies (2.6-5%).

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Conclusions: Paravertebral block is a relatively safe technique which is considered the ‘gold standard’ in patients undergoing thoracic and breast surgeries. It provides an excellent alternative to neuraxial techniques and considerably decreases the opioid consumption.
patients (>12 years in school) (P<0.05). Higher cognitive function was associated with higher postoperative pain (P<0.01). Patients with symptoms of depression and patients with preoperative delirium presented a higher risk for severe pain (P<0.05, P<0.01, respectively). Multivariate analysis showed that depression and a low level of education were independent predictors of severe pain immediately after surgery.

Conclusions: Depression and lower levels of education were independent predictors of immediate severe pain following hip-fracture surgery. These predictors could be used to stratify analgesic risk in elderly patients for pain treatment immediately after surgery. This work was supported by the Ministry of Science and Technological Development of Serbia, contract no. 175046.

ESRA8-0403
E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

PAIN CONTROL IN PERITONECTOMY AND HYPERTERMIC INTRAPERITONEAL CHEMOTHERAPY: A 2 YEAR RETROSPECTIVE STUDY
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Background and Aims: Improved outcome after cytoreductive surgery (CRS) and hyperthermic intraperitoneal chemotherapy (HIPEC) led to an increasing number of these procedures. Epidural analgesia has been recommended as a strategy to reduce post-operative morbidity, regardless of higher risk of spinal haematoma.

Methods: A retrospective analysis of analgesia regimens in patients undergoing CRS and HIPEC, in a Portuguese single center, was performed between January 2015 and December 2017. Data included: demographic data, ASA classification, tumor type, peritoneal carcinomatosis index, type of analgesia performed, level of epidural, type of epidural analgesia regimens, anesthesia and surgery time, hospital and ICU admission days, chemotherapy type, morbidity and mortality rates, patient satisfaction.

Results: n=22, 3 patients excluded. Mean age: 51,7years. Male:Female ratio=6:13. ASA Classification: ASA I – 5,3%; ASA II - 63,1%; ASA III – 31,6%. Mean hospitalization time: 16,7 days. Mean ICU admission: 3,84 days. Epidural catheter use: 94,7%. Mean epidural catheter time: 7,7 days. Thoracic epidural catheterization: 76,5%. Lumbar epidural catheterization: 23,5%. Reoperation rate:31,6%. Death rate at 30 days: 5,3%. No epidural haematoma reported. The use of epidural analgesia was associated with lesser mortality (P<0.001), lesser time of post-operative mechanical ventilation (p=0,005) and lesser ICU admission days (p=0,004). No differences between different epidural analgesia regimens and time of hospital admission or time of post-operative ventilation.

Conclusions: In our study, epidural analgesia was a safe and effective option in CRS and HIPEC, and was associated with shortened duration of postoperative ventilation, lesser mortality, and fewer ICU admission days.

ESRA8-0483
E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

ERECTOR SPINAE PLANE BLOCK (ESP) FOR POSTOPERATIVE ANALGESIA FOR MASTECTOMY TOTAL RADICAL: CASE REPORT
Rueda V.1, Orozco Galvis E.2, Serrano R.E.2 1Dra Viviana P. Rueda Rojas, Anestesiologia, Bucaramanga, Colombia, 2Universidad Industrial de Santander, Anestesiologia, Bucaramanga, Colombia.

Background and Aims: Postoperative pain control in breast cancer surgery has become one of the most important goals for anaesthetists. Ultrasound-guided erector spinae plane (ESP) block is innovative, easy, and safe.

Methods: This case report involves a 50-year-old female patient weighing 62 kg with an 8-year history of a mass in the right breast which has undergone rapid progressive growth, involving the entire breast over the past 7 months, which was diagnosed as a phyllodes tumor. Simple right mastectomy with axillary lymph node dissection and pectoralis major fascia resection were performed under general anesthesia. Ultrasound-guided erector spinae plane block was performed for postoperative analgesia, with excellent response up to 18 hours following the procedure.

Results: The patient was placed on left lateral decubitus and, following asepsis and anti-sepsis, T6 to T7 and right paravertebral ultrasound was performed using a high frequency linear probe, to identify the anatomy (Figure 2) Bupivacaine with 0.25% epinephrine and 0.5% lidocaine was administered (total volume 20mL), achieving satisfactory erector spinae hydrodissection. Assessment 4hours later found an area of anesthesia comprised by the right anterior hemithorax and axillary region and anesthesia from T4 to T12 in the posterior region (Figure 3) Pain assessment was performed over a 30-hour period using the analog visual scale.
Based on our findings, ESP block may be recommended as an option or adjunct for pain management.

Conclusions: ESP block is a safe, innovative strategy that is easy to perform and ensures good postoperative analgesia in radical mastectomy, reducing opioid requirements. It offers good pain management, contributing to faster patient recovery.

ESRA8-0108
E-POSTER VIEWING
POSTOPERATIVE PAIN MANAGEMENT
DEXEMEDETOMIDINE USE INSIDE OPERATION THEATER. -CASE STUDY

Background and Aims: Analgesia for short procedures or ambulatory surgery as (wake fiber-optic bronchoscopy, ophthalmic procedures, back injections, awake craniotomy and other minor procedures) has several challenges to an anesthetist. The patient must be sedated to a state where patient can tolerate the surgical procedure, alert responding and co-operative like in awake craniotomy for neurocognitive testing. Use of Dexmedetomidine (PrecedeX) medication for procedural sedation in non-intubated patients prior to or during surgical procedures.

Methods: Start loading dosage of 0.5-1 mcg/kg IV over 10 minutes then maintenance 0.2-0.4 mcg/kg/hr. IV titrate to effect. (Generally initiate at 0.5-1 mcg/kg over 10 minutes, followed by a maintenance infusion initiated at 0.6 mcg/kg/hr and titrated to achieve desired clinical effect with doses ranging from 0.2 to 1 mcg/kg/hour).

Target population: adults.

Results: Forty-one cases were observed for vital signs, depth of sedation, patient response, and arousal effect. Results: showed 30 cases got good smooth deep sedation without complications, 11 cases got low blood pressures with low heart rates needed stopping infusion, pressor support medications.

Conclusions: PrecedeX dosing should be individualized and titrated to desired clinical response. It should be administered using a controlled infusion device with full monitoring devices and oxygen supplement.

ESRA8-0112
E-POSTER VIEWING
POSTOPERATIVE PAIN MANAGEMENT
THE COMPARISON OF APEX FEMORAL TRIANGLE BLOCK VERSUS FEMORAL NERVE BLOCK FOR ATTAINMENT TIME OF DISCHARGE CRITERIA AFTER TOTAL KNEE ARTHROPLASTY
Sakai N., Tarushic C., Sudani T., Takada M. Daiyukih General Hospital, Dep. Anaesthesiology and Intensive Care Medicine, Ichinomiya, Japan.

Background and Aims: Femoral nerve block (FNB) is a standard for postoperative pain management after total knee arthroplasty (TKA) however it leads quadriceps. Apex femoral triangle block (aFTB) is an excellent counter-plan for detecting nerve branches for knee with ultrasound imaging. We compared the effect of aFTB for attainment time of discharge criteria with FNB.

Methods: Approved by IRB and informed consents was received from all subjects (UMIN26045). A total of 182 subjects was randomized to receiving FNB or aFTB with 0.25% levobupivacaine 10ml. Tibial nerve block and multimodal analgesia protocol were provided. We evaluated that aFTB is noninferior to FNB for the attainment hours of early discharge criteria (good pain control with oral analgesics without opiate, ability of knee flexion above 90 degrees, and start gait rehabilitation) with 6 hours margin. We also tested the ability of the straight leg raise (SLR), the pain scores, consumption of additional analgesics, and knee range of motion.

Results: We analysed 91 and 88 subjects who received aFTB and FNB, respectively. Compared with preset non-inferiority margins, the aFTB-FNB difference (95% CI) in the attainment hours of early discharge criteria were -2.7 hours (+8.3 to 3.0; p<0.0001). The number of patients who acquired SLR in postoperative one hour was 72/91 in aFTB versus 33/88 in FNB (p<0.0001), and 81/91 in aFTB versus 73/88 in FNB (p=0.34) on postoperative day 1. Other outcomes were not significantly different.

Conclusions: The results suggest aFTB provides noninferior early attainment time for discharge criteria and acquires superior ability of SLR test for patients undergoing TKA.

ESRA8-0295
E-POSTER VIEWING
POSTOPERATIVE PAIN MANAGEMENT
TO COMPARING THE EFFICACY OF CAUDAL LOCAL ANAESTHETICS ALONE AND WITH MORPHINE FOR PERIOPERATIVE ANALGESIA IN SPINE SURGERY
Sawhney C., Malviya A. All India Institute of Medical Sciences, Anaesthesiology-Pain Medicine and Critical Care, New Delhi, India.

Background and Aims: Perioperative pain during spine surgery is associated with limited mobility, delayed lung function recovery and perioperative morbidity. There is no consensus on a well-structured protocol. We planned to evaluate the efficacy and safety of single shot ultrasound guided caudal bupivacaine with or without morphine in lumbar spinal surgery.

Methods: After obtaining institutional ethics committee approval, 40 patients scheduled for lumbar spinal surgery were included in the study. Following prone position after induction of general anesthesia, the patients were randomly allocated to a group based on computer generated randomization. Group 1 (LA) received ultrasound guided caudal epidural block with 20ml of 0.25% bupivacaine and Group 2 (LM) received 59ug/kg morphine along with 20ml of 0.25% bupivacaine. Intrathecal haemodynamics and analgesia requirement were noted. Postoperatively, the patient was connected to patient controlled analgesia (PCA) pump. Analgesia requirement and any adverse effects were noted for 24 hours.

ESRA8-0462
E-POSTER VIEWING
POSTOPERATIVE PAIN MANAGEMENT
EFFICACY OF LOCALLY INFILTRATED LEVOBUPIVACAINE AND LIDOCAINE FOR POSTOPERATIVE ANALGESIA FOLLOWING NASAL SURGERY IN THE AMBULATORY SETTING
Sakie K1, Sakie L2, Bagarie D3 1Faculty for dental medicine and health- Osijek-Polyclinic bagatin for maxilofacial surgery Zagreb, Anesthesiology, Zagreb, Croatia, 2University Hospital Sveti duh, Anaesthesiology, Zagreb, Croatia, 3Plastic Surgery Polyclinic bagatin Zagreb, Plastic Surgery, Zagreb, Croatia.

Background and Aims: We compared the use of preincisional 2% lidocaine with epinephrine (LA) and levobupivacaine 0.25% plain (LB) for postoperative analgesia in patients undergoing nasal surgery.

Methods: Sixty patients were randomly assigned to receive preincisional local infiltration under general anesthesia. Group LB received levobupivacaine 0.25%, and group LA epinephrine + 2% lidocaine. Visual analog scale values 30 min and 1, 3, 6 h postoperatively and the need for rescue analgesic treatment in the first 24h of all patients was recorded.

Results: At 30 min under 1, 3, 6 h postoperatively, visual analog scale values were lower in group LB than in group LA (P=0.0001, P=0.002, P=0.023, P=0.301, respectively). The analgesic requirement was significantly lower in group LB when compared with that in group LA (P=0.038).

Conclusions: We conclude that postoperative analgesia in nasal surgery with local infiltration of levobupivacaine as an adjunct to general anesthesia, was significantly more potent and longer lasting than that achieved by lidocaine + epinephrine. Conventional non-steroidal anti-inflammatory drugs in combination with paracetamol, administrated in time to provide sufficient analgesia in the early recovery phase are optimal in addition, weak opioids are recommended for moderate pain and strong opioids for severe pain, on request.
Results: There was no statistically significant difference in the intraoperative fentanyl requirement and the time for first analgesia requirement between the two groups. However, there was a statistically significant difference in the postoperative 24 hours morphine consumption between the two groups. There was no statistically significant difference in PONV, urinary retention, respiratory depression and pruritus between the two groups.

Conclusions: Single shot caudal local anaesthetic (20ml of 0.25% bupivacaine) along with morphine (50µg/kg) provides adequate perioperative analgesia without an increase in adverse effects for lumbar sacral spine surgery.

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## ESRA8-0132
### E-POSTER VIEWING
### POSTOPERATIVE PAIN MANAGEMENT
#### CONTINUOUS TRANSVERSUS ABDOMINIS PLANE (TAP) BLOCKADE FOR POST-OPERATIVE ANALGESIA IN PATIENTS UNDERGOING ABDOMINAL SURGERY – IS IT THE NEW UNDERTOW FOR POST-OPERATIVE PAIN RELIEF?

Saxena S.1, Wong M.H.2, Naidu M.S.2, Quek C.1 Khoo Teck Puat Hospital, Anaesthesia, Singapore, Singapore, 2 Khoo Teck Puat Hospital, Surgery, Singapore, Singapore.

**Background and Aims:** Patients who undergo major abdominal surgery are at risk of developing acute post-operative pain and it is vital to ensure that they receive adequate post-operative analgesia. Continuous TAP blockade has been shown to be non-inferior to epidural analgesia as part of multimodal pain management for these patients.

We compared TAP blockade to epidurals, and TAP blockade under ultrasound guidance has a less acute learning curve which residents/readers would be able to perform with greater confidence. This study objective is to review the trend of continuous TAP and Thoracic Epidural Analgesia (TEA) insertion for abdominal surgery performed by residents.

**Methods:** A retrospective data collection was performed on surgical patients who received either continuous TAP blockade or TEA for major abdominal surgery from 01 Jan 2014 to 31 December 2017.

**Results:** 112 TEA and 84 continuous TAP blockade were performed in 2014 whilst 68 TEA and 144 continuous TAP blockade were performed in 2015. It changed to 56 TEA AND 161 continuous TAP blockade in year 2016 and 42 TEA and 213 continuous TAP blockade in 2017 for major abdominal surgeries. 27%, 33.8%, 24%, and 21% of TEA were performed by junior anaesthesiologists (residents, registrars or fellows) whilst 77.7% (103), 75.4% (126) 81% (171) and 88% (213) continuous TAP blockade were performed by the junior staff from 2014 till 2017.

**Conclusions:** With the introduction of TAP catheters, the number of epidurals relative easier to perform safe had shorter learning curve but also offer opioid-sparing analgesia.

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## Table I. Demographic Variables and Surgery

<table>
<thead>
<tr>
<th>PARAMETER / GROUP</th>
<th>Group GA/AB</th>
<th>Group SA</th>
<th>p*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of patients (n)</td>
<td>41</td>
<td>48</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td>Sex (F/M)</td>
<td>21/20</td>
<td>24/22</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td>Age (year)</td>
<td>57.3 ± 5.5</td>
<td>55.8 ± 3.1</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td>Duration of Surgery</td>
<td>115 ± 4</td>
<td>121 ± 3</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td>Type of Surgery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hallux Valgus Osteotomy (n)</td>
<td>20</td>
<td>27</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td>Bunionectomy (n)</td>
<td>15</td>
<td>17</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td>Mortons neurectomy (n)</td>
<td>1</td>
<td>2</td>
<td>&gt;0.05</td>
</tr>
</tbody>
</table>

Abbreviations: GA/AB: General Anaesthesia + Axile Block; SA: Spinal Analgesia. p* values <0.05 were considered as statistically significant.

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## Table II. Comparison of Postoperative Period Between Groups

<table>
<thead>
<tr>
<th>PARAMETER / PERIOD</th>
<th>Group GA/AB</th>
<th>Group SA</th>
<th>p*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time to first analgesic requirement (min)</td>
<td>190 ± 45</td>
<td>125 ± 22</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Mean analgesic consumption (mg)</td>
<td>560 ± 40</td>
<td>590 ± 64</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Time to mobilization (min)</td>
<td>125 ± 13</td>
<td>320 ± 18</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Length of Hospital Stay (min)</td>
<td>310 ± 12</td>
<td>545 ± 22</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Complications</td>
<td>0</td>
<td>3</td>
<td>&lt;0.05</td>
</tr>
</tbody>
</table>

Abbreviations: GA/AB: General Anaesthesia + Axile Block; SA: Spinal Analgesia. p* values <0.05 were considered as statistically significant.

### Methods:
After hospital’s ethics committee approval, medical records of patients who underwent OFS between June and December 2017 were evaluated. ASA I-II, 87 patients were included in the study; 46 patients had received SA (Group SA) using 15 mg of 0.5% heavy bupivacaine, 41 patients (Group GA-AB) had received GA (propofol-remifentanil) based TIVA combined with ankle block using 4 ml of local anaesthetic mixture containing 0.5% bupivacaine and 2% lidocaine for nerve blockage. Times to first analgesic requirement and mobilization, mean analgesic consumption (acetaminophene) and LHS were compared. Discharge from hospital was assessed using Post Anaesthesia Discharge Scoring System (PADSS).

### Results:
Demographic variables and duration of the surgery were similar between groups (Table I).

In group GA/AB mean analgesic consumption was lower and the time to first analgesic requirement was higher, while the time to mobilization and LHS were increased in group SA (p<0.05). In group SA, two patients had urinary retention and one patient was admitted to hospital after discharge due to postspinal headache (Table II).

### Conclusions:
Combination of ankle blocks with GA has provided superior analgesia and faster discharge with less motor impairment and without bladder dysfunction compared to SA.

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## ESRA8-0296
### E-POSTER VIEWING
### POSTOPERATIVE PAIN MANAGEMENT
#### ANKLE BLOCK COMBINED WITH GENERAL ANAESTHESIA VERSUS SPINAL ANAESTHESIA IN OUTPATIENT FOOT SURGERY

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**Background and Aims:** Postoperative pain and immobilization are major problems which negatively affect patient’s discharge in outpatient foot surgery (OFS). The aim of this retrospective study was to compare spinal anaesthesia (SA) with general anaesthesia (GA) combined with ankle blocks (AB) in terms of postoperative analgesia and length of hospital stay (LHS) in OFS.

### Methods:
We compared TAP blockade to epidurals, and TAP blockade under ultrasound guidance has a less acute learning curve which residents/readers would be able to perform with greater confidence. This study objective is to review the trend of continuous TAP and Thoracic Epidural Analgesia (TEA) insertion for abdominal surgery performed by residents.

### Results:
Demographic variables and duration of the surgery were similar between groups (Table I).

In group GA/AB mean analgesic consumption was lower and the time to first analgesic requirement was higher, while the time to mobilization and LHS were increased in group SA (p<0.05). In group SA, two patients had urinary retention and one patient was admitted to hospital after discharge due to postspinal headache (Table II).

### Conclusions:
Combination of ankle blocks with GA has provided superior analgesia and faster discharge with less motor impairment and without bladder dysfunction compared to SA.

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## ESRA8-0104
### E-POSTER VIEWING
### POSTOPERATIVE PAIN MANAGEMENT
#### PECS VERSUS ERECTOR SPINAE BLOCK FOR BREAST SURGERIES: A RANDOMISED CONTROLLED TRIAL

Sinha C.1, Kumar A.2, Prasad C.1 AIIMS, Anaesthesia, Patna, India, 2 AIIMS-Patna, Anaesthesia, Patna, India.

**Background and Aims:** Patients who undergo breast surgery are at risk of developing acute post-operative pain and it is vital to ensure that they receive adequate post-operative analgesia. Continuous TAP blockade has been shown to be non-inferior to epidural analgesia as part of multimodal pain management for these patients.

We compared TAP blockade to epidurals, and TAP blockade under ultrasound guidance has a less acute learning curve which residents/readers would be able to perform with greater confidence. This study objective is to review the trend of continuous TAP and Thoracic Epidural Analgesia (TEA) insertion for abdominal surgery performed by residents.

### Methods:
A retrospective data collection was performed on surgical patients who received either continuous TAP blockade or TEA for major abdominal surgery from 01 Jan 2014 to 31 December 2017.

### Results:
Demographic variables and duration of the surgery were similar between groups (Table I).

In group GA/AB mean analgesic consumption was lower and the time to first analgesic requirement was higher, while the time to mobilization and LHS were increased in group SA (p<0.05). In group SA, two patients had urinary retention and one patient was admitted to hospital after discharge due to postspinal headache (Table II).

### Conclusions:
Combination of ankle blocks with GA has provided superior analgesia and faster discharge with less motor impairment and without bladder dysfunction compared to SA.
Background and Aims: The neural supply of the anatomical structures involved in breast surgery is not well understood when it comes to provide analgesia for perioperative pain relief. As an alternative for epidural and paravertebral techniques, Pecs II was designed with lesser side effects and better pain relief. Later on a new block called erector spinae block has been described which blocks the dorsal and ventral rami of the thoracic nerves. We aimed to compare these two blocks in terms of analgesic efficacy in female patients undergoing unilateral modified radical mastectomy.

Methods: After clearance from institutional ethical committee and clinical trial registry of India, sixty female patients undergoing unilateral modified radical mastectomy were randomized into two groups.

Group 1: received modified PECS block.

Group 2: received erector spinae block. All the patients were administered general anaesthesia thereafter. Postoperatively patients received IV patient controlled analgesia with morphine. Total analgesic requirement, duration of analgesia, and pain scores were compared.

Results: The duration of analgesia was significantly more in group II (24.05 hrs +3.05) when compared with group I (20.53 hrs+3.81). The total morphine requirement was also more in group I (1.80 + 1.32 vs 0.87 + 1.00).

Conclusions: Erector spinae block is a better block when compared to PECS block in breast surgeries in terms of analgesia, opioid requirement and patient satisfaction.

ESRAB-0173
E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

FEASIBILITY OF COMBINED SPINAL - EPIDURAL ANALGESIA FOR IMPROVEMENT WITHIN ENHANCED RECOVERY PATHWAYS IN TOTAL HIP ARTHROPLASTY (THA)

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Background and Aims: Objective was to assess feasibility of combined spinal epidural analgesia (CSEA) as part of ERAS protocol in THA patients.

Methods: Protocol was part of bigger RCT. Adult ASA II patients were included. Spinal analgesia was performed in L2-3 level with 2.5-3 ml of 0.5% bupivacaine. Postoperative patient controlled epidural analgesia (PCEA) continued until 8 AM next morning. The PCEA pump was preset to 5 ml/h basal infusion of 0.1% bupivacaine, and 5 ml rescue boluses with 30 min lockouts. Oral paracetemol 1g was given for breakthrough pain. Mobilisation trial was performed at 6 PM on the surgery’s day. Patients had to stand without assistance for 60 seconds. Trial failure was defined as bradycardia (HR<50 b/min) and/or arterial hypotension (MAP<55 mmHg). Consumption of bupivacaine, maximum pain intensity during postoperative 24 h with numeric rating score (NRS), patient’s overall satisfaction level by score of [0-10] assessed, and mobilisation trial failure/success were recorded.

Results: Data were obtained from 79 subjects, 66.64±9.33 years old, body mass index 29 (24;33) kg/m2. Pain score was NRS 4 (3.6). Overall consumption of bupivacaine was 142.45±34.22 mg, mean 1-h dose 7.09±1.66 mg, difference between demanded and administered boluses was 66.67 % (40.78:84.52). Paracetemol given for 2 subjects. Mobilisation trial failed in 9 subjects. Overall patient satisfaction was 9 (9.10).

Conclusions: Postoperative epidural analgesia does not limit early patient mobilisation. The use of CSEA as part of ERAS pathways is feasible in THA surgery patients.

References:

Background and Aims: Pyeloplasty patient insertion—provides improved analgesia in a transversalis fascia plane block and postoperative pain management.

Conclusions: Six patients had 60% to 70% pain relief for an average of 10 to 12 hours. Only one patient had 30% pain relief. No complications related to block were seen.

Results: Pain interference score and pain severity score was significantly more at 1 month. Pain interference score and pain severity score was significantly more in patients with pain at 1 month (p = 0.002). Inadequate consumption of analgesics was noted at 1 month. Pain interference score and pain severity score was significantly more in patients with pain at 1 month (p = 0.001 and 0.033).

ESRA8-0058
E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

ERECTORSPIANE PLANE BLOCK IN THE MANAGEMENT OF PAIN AFTER BREAST CANCER SURGERY: A CASE SERIES

Thota R., Kalkundre R., Jain P. Tata Memorial Hospital, Anaesthesiology-Critical Care & Pain, Mumbai, India.

Background and Aims: Breast cancer surgery is a common surgical procedure with 54% of the patients experiencing clinically meaningful acute postsurgical pain. Regional techniques like Pecs block, thoracic epidural and erector spinae plane (ESP) block, opioids and analgesics are various modalities for pain relief. Forero et al. has described new technique interfascial Erector Spinae Plane (ESP) Block for thoracic neuropathic pain, acute postsurgical pain and posttraumatic pain. The ultrasound-guided erector spinae plane block is a new and relatively safe technique for breast cancer surgeries.

Our aim was to explore the application of ESP blocks in breast cancer surgery.

Methods: The ESP block was performed in recovery room in breast surgery patient post operatively who were having pain score more than 6 (Numeric rating scale) in spite of regular postoperative analgesics, in a cohort of 7 patients. The ultrasound guided blocks were performed with injection of 20cc 0.25% bupivacaine. Drug was deposited in fascial plane between the deep surfaces of erector spinae muscle at the 5th thoracic vertebrae transverse processes. Patients were observed till 12 hours or requirement of intravenous medications. Pain relief was noted.

Results: Six patients had 60% to 70% pain relief for an average of 10 to 12 hours. Only one patient had 30% pain relief. No complications related to block were seen.

Conclusions: ESP block may be considered as one of the effective mode of analgesia in breast surgery.

ESRA8-0472
E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

TRANSVERSALIS FASCIA PLANE BLOCK AND TRANSVERSUS ABDOMINIS PLANE BLOCK COMBINATION -PERFORMED WITH SINGLE NEEDLE INSERTION- PROVIDES IMPROVED ANALGESIA IN A PYELOPLASTY PATIENT

Tuygar S., Selvi O., Ozer Z. Maltepe University Faculty of Medicine, Anesthesiology and reanimation, Istanbul, Turkey.

Background and Aims: Transversus abdominis plane (TAP) block is a regional anesthesia technique frequently applied in lower abdominal surgeries. Cutaneous sensory blockage can be achieved in Th7-L1 dermatomes when the posterior TAP is applied, while the cutaneous sensory block is provided in Th10-Th12 dermatomes when the lateral TAP is applied. However, in both techniques, the L1 block often fails. The Transversal Fascia Plane (TFP) block selectively blocks Th12-L1 dermatomes. We would like to describe and present

Ultrasound Guided TAP and TFP block application with single needle entry in this case.

Methods: At age 48, the female patient was referred to ASA 2, who had multiple stone-dropping stories and planned open pyeloplasty. The patient's operation was performed under general anesthesia. Surgical incisions were made from the subcostal region to the inguinal region on an extensive basis. The operation lasted 195 minutes. Perioperative 1 g paracetamol and 20 mg tenoxicam were administered intravenously. It was decided to add regional techniques to the multimodal analgesia of the patient. The linear transducer was placed on the transverse plane of the abdomen. Lateral TAP block was applied (25 mL) and the needle was advanced in the same plane and TFP block was applied (15 mL).

Results: The sensory evaluation of the patient at the first postoperative hour revealed that the sensory block from Th6 to L1 was excellent. The patient did not have pain until the 9th hour postoperatively.

Conclusions: The USG guided TAP + TFP block combination, performed by single needle insertion, provides an effective cutaneous abdominal sensorial block.

ESRA8-0437
E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

COMPARISON BETWEEN LOW-DOSE KETAMINE INFUSION AND INTRAVENOUS MORPHINE INFUSION FOR ANALGESIA IN LAPAROTOMY MYOMECTOMY: A DOUBLE-BLIND, RANDOMIZED, CONTROLLED CLINICAL TRIAL

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Background and Aims: The incidence of acute postoperative pain is approximately 40%. Oncologic TKRs involve wide local resection of the bone and soft tissues to restore function. Hence, the amount of postoperative pain and effect on the quality of life after this surgery is expected to be at least equal to, if not more, than the incidence seen in the non-oncologic TKRs.

Our aim was to identify pain severity and impact on function at 1 month after oncologic TKR.

Methods: Prospective, observational study over a 9-month period from February 01, 2017 to October 31, 2017. Adult patients who consented were enrolled. Patients' data - age, sex, preoperative pain and analgesics, intraoperative details of surgery, tumour stage use, postoperative pain details, pain details at 1 month after surgery and surgical complications were recorded. The painDETECT and BPI scale was used to assess pain. The incidence of acute postoperative pain is approximately 40%. Oncologic TKRs involve wide local resection of the bone and soft tissues to restore function. Hence, the amount of postoperative pain and effect on the quality of life after this surgery is expected to be at least equal to, if not more, than the incidence seen in the non-oncologic TKRs.

Results: Over 9 months, 31 patients were enrolled in the study. At 1 month, 64.5% continued to have pain, among them 48.4% had moderate to severe pain. Pain interference score and pain severity score was significantly more in patients with pain at 1 month (p = 0.002). Inadequate consumption of analgesics was noted at 1 month. Pain interference score and pain severity score was significantly more in patients with pain at 1 month (p = 0.001 and 0.033).

Conclusions: Majority of patients who undergo oncologic TKRs continue to have persistent pain that significantly interferes with their daily function at 1-month post-surgery, more so if postoperative pain is poorly controlled.

ESRA8-0176
E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

ESRA Abstracts Regional Anesthesia and Pain Medicine • Volume 43, Number 7, Supplement 1, October 2018
Background and Aims: Our aim was to compare the effects of intravenous low dose ketamine infusion versus morphine infusion analgesia in pain reduction by assessing the amount of fentanyl needed intraoperatively and VAS postoperatively for patients undergoing myomectomy in Al Kasr Al-Ainy hospital.

Methods: Subjects and Methods: This study is a prospective, randomized, double-blinded that will be performed in Kasr Al-Ainy hospital on 80 patients undergoing myomectomy. The computer will be used to randomly allocate all parturient into two groups. Group I: Ketamine group: will be administered ketamine in a loading dose of 0.2 mg/kg over 5 min pre incision followed-by an infusion at 0.2 mg/kg/h up to the end of surgery. (Group K, n = 40) Group II: Morphine group: will be administered morphine in a loading dose of 0.1 mg/kg over 20 min pre incision then infused with morphine The initial infusion rate is 5 - 40 microgram/kg/hour. (Group M, n = 40).

Results: There were no statistically significant differences between the two studied groups as regards to the amount of fentanyl required and occurrence of complications The VAS assessment showed a noticeable decrease in both groups postoperatively.

Conclusions: Using a low dose ketamine infusion intraoperatively throughout an elective laparotomy myomectomy procedure was as effective as morphine infusion in reducing intraoperative and postoperative fentanyl requirements, also as regards to the postoperative pain, without causing severe adverse effects.

ESRAR-0436
E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

DEVELOPING A PERIOPERATIVE PROTOCOL FOR PATIENTS HAVING MAJOR LOWER LIMB AMPUTATION: A QUALITY IMPROVEMENT PROJECT IN CONJUNCTION WITH THE ACUTE PAIN SERVICE AT TORBAY HOSPITAL

Warrener T. Torbay Hospital- Torbay and South Devon NHS Foundation Trust, Department of Anaesthesia and Perioperative Medicine, Torquay, United Kingdom.

Background and Aims: Perioperative mortality following major lower limb amputation (MLLA) has come into focus in recent years. Many patients undergoing MLLA will have longstanding, and often severe, ischaemic pain requiring preoperative opioid analgesia. MLLA also carries one of the highest incidences of persistent post-surgical pain. Torbay Hospital already uses several well-established perioperative care protocols. This QI project aims to address the issue of pain control following MLLA.

Methods: This QIP aims to address this issue by using a well-tested QI methodology, the Model for Improvement. This accelerates improvements in the quality of healthcare processes and outcomes via two phases:

1. Fundamental questions:
   (i) What are we trying to accomplish? Optimal postoperative pain control in patients undergoing MLLA.
   (ii) How will we know that a change is an improvement? Improved patient satisfaction/pain scores.
   (iii) What changes can we make that will result in improvement? Introduction of perioperative management protocol.

2. Plan Do Study Act cycles repeated going forwards to continually evaluate/improve protocol.

Results: A local data search revealed 37 cases between March 2016 – 2018. Closer inspection of the perioperative management of 14 of these cases exposed room for improvement in terms of monitoring standards, type of anaesthesia, consolidation of regional techniques used, including the use of a perineural catheter, and prescribed post-operative analgesia.

Conclusions: In response to the findings highlighted, an evidence-based protocol has been produced and following local approval will be introduced at our institution. In keeping with the QI methodology outlined above, subsequent evaluation, in terms of both compliance and outcome, will be completed.

ESRAR-0109
E-POSTER VIEWING

POSTOPERATIVE PAIN MANAGEMENT

THE ANALGESIC EFFICACY OF TAP BLOCK VERSUS EPIDURAL ANALGESIA: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background and Aims: TAP block has gained popularity in regional anaesthesia to provide postoperative analgesia but its advantage over epidural analgesia is disputed. The objective of this meta-analysis was to compare the analgesic efficacy of both techniques.

Methods: We followed the PRISMA statement guidelines. Only trials comparing TAP block with epidural analgesia were included meta-analyses were performed following mostly a random-effects model. The primary outcome was pain score at rest (analogue scale, 0-10) on postoperative day 1 analyzed in subgroups according to the population (children and adults). Secondary outcomes included rate of hypotension, length of stay, and functional outcomes (time to first bowel sound, time to first flatus). Ten controlled trials, including 505 patients, were identified.

Results: Pain score at rest on postoperative day 1 was equivalent in both groups in children (mean difference: 0.3; 95%CI: -0.1, 0.6; I2=0%; p=0.15) and in adults (mean difference: 0.5; 95%CI: -0.1, 1.0; I2=81%; p=0.10). Rate of hypotension was higher in the epidural analgesia group (RR: 0.13; 95%CI: 0.04, 0.38, I2=0%; p=0.0002), while hospital length of stay was reduced in TAP block group (mean difference: -0.6 days; 95%CI: -0.9, -0.3 days; I2=0%; p<0.0001), without impact on functional outcomes.

Conclusions: There is low evidence that TAP block and epidural analgesia are equally effective in treating postoperative pain. Additional trials with robust methodology are required to better define the analgesic effect and the functional impact of each technique before recommending TAP block that is associated with less episodes of hypotension and reduced length of stay.

ESRAR-0348
E-POSTER VIEWING

CHRONIC PAIN MANAGEMENT

SAPHENOUS NEURITIS TREATMENT WITH A SINGLE SHOT FEMORAL BLOCK: A CASE REPORT

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FIGURE 1.

<table>
<thead>
<tr>
<th>Group</th>
<th>Pain score at rest</th>
<th>Pain score on postoperative day 1</th>
<th>Hypotension rate</th>
<th>Length of stay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block</td>
<td>Mean</td>
<td>2 SD</td>
<td>Mean</td>
<td>2 SD</td>
</tr>
<tr>
<td>TAP</td>
<td>3</td>
<td>0.2</td>
<td>4</td>
<td>0.3</td>
</tr>
<tr>
<td>Epidural</td>
<td>2</td>
<td>0.1</td>
<td>3</td>
<td>0.2</td>
</tr>
</tbody>
</table>

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**ESRA Abstracts**

*Regional Anesthesia and Pain Medicine • Volume 43, Number 7, Supplement 1, October 2018*

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**Background and Aims:** Saphenous neuropathy due to saphenectomy treated well with a femoral nerve block.

**Methods:** A 65-year-old woman overweight with type II diabetes mellitus and coronary artery disease underwent surgery to replace 4 coronary arteries with grafts derived from the saphenous vein. Two months later, she complains of intense pain on the inner surface of the thigh with a VAS score of 8-9. Saphenous nerve neuralgia occurs due to saphenectomy injury. The femoral nerve was blocked using US with a bolus dose of 10ml ropivacaine 2mg/ml.

**Results:** The patient was fully recovered from pain symptoms ten minutes later. Eight weeks later she is still free of pain.

**Conclusions:** Saphenous nerve injury is quite rare during saphenectomy and difficult to recognize although it is well treated with a single shot femoral nerve block.

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**ESRA-0186**

**E-POSTER VIEWING**

**CHRONIC PAIN MANAGEMENT**

**EVALUATION OF CRPS PATIENTS USING AN SCS SYSTEM WITH MULTIPLE WAVEFORM AND STIMULATION FREQUENCY OPTIONS**

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1 The Toledo Clinic, Pain Management, Toledo, OH, USA, 2 Geisinger Medical Center, Pain Management, Danville, USA, 3 Pain Treatment Centers, Pain Management, Ocala, FL, USA, 4 University Hospitals of Cleveland – Case Western Reserve Medical Center, Pain Management, Cleveland, OH, USA, 5 NeuroMicroSpine, Pain Management, Pensacola, FL, USA.

**Background and Aims:** Complex Regional Pain Syndrome (CRPS) can be successfully treated with Spinal Cord Stimulation (SCS), but some patients experience loss of treatment effectiveness over time. A recent study demonstrated that strikingly different frequencies and waveforms were preferred by individual patients with CRPS (Kriek N. et al. 2017). To further verify and expand upon this work, we assessed clinically diagnosed CRPS patients implanted with a newer generation SCS system that provides for multiple waveform and stimulation frequency options.

**Methods:** All eligible patients of this real-world case-series were diagnosed with CRPS and implanted with a multiple waveform SCS system (Precision Spectra, Boston Scientific). Assessments of (or related to) pain relief over time are actively being conducted as captured from retrospective chart review. Additional documentation of particular waveforms and/or stimulation frequencies utilized during the duration of treatment will be presented.

**Results:** Mean NRS at baseline and last follow-up (mean duration: 389 days) were 7.6 and 3.7, respectively (t-test=3.9, p< 0.0001) for 35 patients. 81% of patients (17/21) reported greater than 50% improvement at their last follow-up and 38% (8/21) reported 91-100% pain relief at last follow-up.

**Conclusions:** The ability to provide various options within a single SCS device is thought to be helpful in avoiding loss of efficacy due to adaptation or other modes of disease plasticity over time. This study therefore seeks to add to the overall comprehensiveness of data investigating SCS-implanted patients with CRPS who have access to multiple options that enable individually selected use of various waveforms and/or stimulation frequencies.

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**ESRA-0324**

**E-POSTER VIEWING**

**CHRONIC PAIN MANAGEMENT**

**THE EFFECTS OF INTRA-ARTICULAR PLATELET-RICH PLASMA INJECTIONS VERSUS CORTICOSTEROID INJECTIONS ON PAIN SCORE AND FUNCTION IN KNEE OSTEOARTHRITIS**

Bagatir N., Cinar C., Soluk Ozdemir Y., Bardak A.N., Ones K., Metin Terzibasioglu A. Health Sciences University Istanbul Physical Therapy And Rehabilitation Education And Research Hospital, Physical Therapy And Rehabilitation, Istanbul, Turkey.

**Background and Aims:** Osteoarthritis is a chronic joint disease that leads to pain and disabilities. The aim of this preliminary study is examine the effects of platelet-rich plasma (PRP) injection and corticosteroid (CS) injections on the level of pain and function of the knee joint in patients with OA.

**Methods:** The participants who suffered from knee osteoarthritis were randomly divided into two groups: intra articular injection of PRP and CS. Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC), Short Form-36 (SF-36), ranges of motions (ROM) of knee and pain intensity based on Visual Analog Scale (VAS) rest and motion were measured before the treatment and four weeks after the treatment. Also knee cartilage thickness were measured by ultrasonography in both groups.

**Results:** Forty participants were involved in this study that group 1 (corticosteroid injections) was included 19 patients and group 2 (PRP injections) was 21 patients. VAS rest - VAS motion and WOMAC scores were significantly decreased and ROM flexion, SF-36 scores and knee cartilage thickness measurement were significantly increased in both groups at first month of clinical outcomes, but there were no significantly difference between the two groups.

**Conclusions:** Both PRP and CS injections appears to be effective in symptomatic knee osteoarthritis. We found that there were no superiority of PRP treatment to CS treatment at short time follow up measures, but PRP injections may be show superior clinical outcomes to reduce pain and improvement in the quality of life of patients in the long term when compared with CS injections.

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**ESRA-0136**

**E-POSTER VIEWING**

**CHRONIC PAIN MANAGEMENT**

**EFFICACY OF LUMBAR FACET JOINT INFLTRATION WITH FLUOROSCOPIC GUIDANCE FOR MANAGEMENT OF LUMBAR FACET JOINT PAIN**

Nohra G., Baroud M., Mouawad T., Kassab M.C., Chamandy S. Centre Hospitalier Universitaire Notre Dame des Secours, Pain department and neuro-surgery department, Byblos, Lebanon.

**Background and Aims:** This retrospective study aimed to evaluate the efficacy of lumbar facet corticosteroid plus analgesic infiltration using fluoroscopic guidance in pain in patients with clinically confirmed facet syndrome.

**Methods:** Seventy patients with lumbar facet joint pain nonresponsive to medical treatment underwent facet joint injections using a combination of corticosteroid and analgesic, all patients were screened with magnetic resonance imaging (MRI) prior to treatment. The severity of pain was assessed using a numeric rating scale (NRS) at pretreatment, 6 and 12 months after treatment.

**Results:** A 50% improvement in NRS scores was considered significant. Significant improvement was noted in 65% of patients at 6 and 12 months after treatment.

**Conclusions:** Lumbar facet joint injections with fluoroscopic guidance provide significant pain relief up to one year after treatment in patients nonresponsive to medical treatment and led them to stop chronic analgesic medications.

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**ESRA-0487**

**E-POSTER VIEWING**

**CHRONIC PAIN MANAGEMENT**

**CHRONIC PAIN AFTER HERNIORRAPHY INGUINAL PAIN**

Kassab M.C.1,2, Nasr M.1,2, Mouawad T.2, Chamandy S.1,2 1 Notre Dame de Secours University Hospital, Anestesia- Critical Care and Pain Department, Byblos, Lebanon, 2 Holy Spirit University of Kaslik, Faculty of Medicine, kaslik, Lebanon.
Background and Aims: Hernia repair surgery is one of the most, if not the most frequently performed surgeries. After refining the surgical technique, the most common complication witnessed post-operatively was recurrence to chronic post-herniorrhaphy inguinal pain, affecting more than 10% of the surgical population.

Methods: A retrospective study was conducted on patients referred to our hospital’s pain unit, suffering from pain that lasted for more than three months following hernioplasty; the eligible patients (suffering from neuropathic pain) underwent ultrasound guided nerve blocks of the ilioinguinal, iliohypogastric, and lateral femoral cutaneous nerves via the injection of anesthetics, steroids, or a combination of both. The nerve blocks were done by the same pain specialist, after having adequately determined the type and territory of the pain and pinpointed the nerve in question. Pain evaluation was done by using the numeric pain rating scale during follow-up visits.

Results: The chronic pain study population described a clear improvement of inguinalodynia following nerve blocks. Some patients remained asymptomatic, some had recurrent pain after a period of relief and benefited from new infiltrations, and some patients described no improvements and opted for surgical treatment as their last resort.

Conclusions: Nerve blocks in management of chronic post herniorrhaphy pain have proved to be efficient and a reliable technique, with some patient remaining pain-free for good after interventions, rather than having all patients undergo a second «damage control» surgery.

Background and Aims: Examination of 78 patients with myotonic (MT) syndrome of lumbar osteochondrosis.

Methods: It was established for the first time, that among MT-syndrome patients 54 (69.2 %) an associated damage of two or more muscles prevailed. The most damaged ("key") muscles appeared to be gastrocnemius muscle (43; 55.1 %), glutaeus medius (42; 53.82 %), quadriceps femoris (36; 46.2 %), rectus abdominis and external oblique (32; 41.1 %), pectoral muscle (29; 37.2 %), piriform muscle (29; 37.2 %), lumbar quadratus muscle (28; 35.9 %), glutaeus maximus (19; 24.3 %), glutaeus minimus (16; 20.5 %), adductor (14; 17.9 %) and abductor (9; 11.5 %) thigh muscles.

Results: Medical-rehabilitation complex on damaged extremity was approximated in 27 patients with MT syndrome. The complex included oral reception of katakolon (100 mg 3 times a day for 10 days), tractions on Finntrak-471 table (with force from 3 to 55 kg, a course of 8-10 sessions) and also acupuncture with use acupuncture points of general action with vascular autonomic nervous system orientation (G14, M6, E36, RP6, TR5, V40) and locally-segmented points on the most damaged muscular groups (AT60, VB30 with deep introduction to piriform muscle; VB 34, VB41, F3). Course of treatment - 12-15 sessions.

Conclusions: After treatment damaged extremity pain has completely disappeared in 19 patients, pain essentially decreased and increased tolerance of physical activity in 6 patients. It is established, that katakolon shows not only analgesic and neuroprotective, but also myorelaxing action on muscles of pelvic girdle and feet in patients with acute and chronic pain syndrome.

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E-POSTER VIEWING
CHRONIC PAIN MANAGEMENT
ESRA8-0033
DIAGNOSIS AND TREATMENT OF MYOTONIC AND MYOFASCIAL SYNDROMES OF NECK PAIN
Filipovich A.
Research Center of Medical Assessment and Rehabilitation, neurological, Minsk, Belarus.

Background and Aims: The dynamic monitoring of 195 patients with myotonic and myofascial syndromes of neck pain was done against the control group of 45 people.

Methods: An extended neurological examination was carried out which included roentgenometry of cervical and vertebrocranial areas of spinal column, electromyography of 7 to 9 relevant muscles, finding of the “key” muscle and the overall computer aided assessment of osteomuscular, cardiorespiratory and oxygen transport system disorders.

Results: Clinical and electromyographic criteria for diagnosis of myotonic and myofascial syndromes of neck pain were identified based on the occurrence rates. The role of major system disorders in pathogenesis of neurological manifest of neck pain was studied. New therapeutic approaches to stopping pain have proved to be efficient and a reliable technique, with some patient remaining pain-free for good after interventions, rather than having all patients undergo a second «damage control» surgery.

Conclusions: Nerve blocks in management of chronic post herniorrhaphy pain have proved to be efficient and a reliable technique, with some patient remaining pain-free for good after interventions, rather than having all patients undergo a second «damage control» surgery.

E-POSTER VIEWING
CHRONIC PAIN MANAGEMENT
ESRA8-0035
TECHNICAL MEANS OF REHABILITATION FOR PATIENTS WITH BACK PAIN
Filipovich A.
Research Center of Medical Assessment and Rehabilitation, neurological, Minsk, Belarus.

Background and Aims: Examination of 78 patients with myotonic (MT) syndrome of lumbar osteochondrosis.

Methods: It was established for the first time, that among MT-syndrome patients 54 (69.2 %) an associated damage of two or more muscles prevailed. The most damaged ("key") muscles appeared to be gastrocnemius muscle (43; 55.1 %), glutaeus medius (42; 53.82 %), quadriceps femoris (36; 46.2 %), rectus abdominis and external oblique (32; 41.1 %), pectoral muscle (29; 37.2 %), piriform muscle (29; 37.2 %), lumbar quadratus muscle (28; 35.9 %), glutaeus maximus (19; 24.3 %), glutaeus minimus (16; 20.5 %), adductor (14; 17.9 %) and abductor (9; 11.5 %) thigh muscles.

Results: Medical-rehabilitation complex on damaged extremity was approximated in 27 patients with MT syndrome. The complex included oral reception of katakolon (100 mg 3 times a day for 10 days), tractions on Finntrak-471 table (with force from 3 to 55 kg, a course of 8-10 sessions) and also acupuncture with use acupuncture points of general action with vascular autonomic nervous system orientation (G14, M6, E36, RP6, TR5, V40) and locally-segmented points on the most damaged muscular groups (AT60, VB30 with deep introduction to piriform muscle; VB 34, VB41, F3). Course of treatment - 12-15 sessions.

Conclusions: After treatment damaged extremity pain has completely disappeared in 19 patients, pain essentially decreased and increased tolerance of physical activity in 6 patients. It is established, that katakolon shows not only analgesic and neuroprotective, but also myorelaxing action on muscles of pelvic girdle and feet in patients with acute and chronic pain syndrome.
Methods: A 57-year-old woman suffering from NSAIDs-related hepatotoxicity and severe low-back-pain caused by L5-S1 disc herniation. Pain, weakness and motor disability were referred to lumbar region, radiating through the buttock and posterior left leg. Pre-treatment pain assessment was: NRS=8-10, McGill-Pain-Questionnaire=14 (S9A2V1M2) Roland-Morris-Disability-Questionnaire=18. She assumed Oxycodeone/Naloxone 20/10 mg/die and Pregabalin 150 mg/die without pain relief. Informed consent was obtained, routine vital signs were monitored and an active-tip-cannula was inserted under ultrasound-guidance into the epidural space through the sacral branch of L5 nerve root with PRF.

The following weeks we treated the active myofascial trigger-points of Lumbar Erector Spinae Group, Multifidus, Psoas, Quadratus Lumborum and Gluteal muscles with ultrasound-guided dry-needling.

Results: During 2-months follow-up period, the patient reported a good-quality analgesia without needing NSAIDs nor opiates. (NRS =3, MPQ=5 and RMDQ= 5).

Conclusions: Severe low-back-pain syndrome could be effectively treated with caudal-epidural PRF followed by block. These minimally-invasive procedures combined with dry-needle treatment, could prolong analgesia and reduce oral analgesics consumption. Ultrasound-guidance could reduce complications and improve the efficacy and the safety of these procedures.

Conclusions: Ultrasound-guided dry needling treatment could be a safe and effective technique in the management of chronic muscle nontraumatic pain. The ultrasound visualization allows to treat even deeper muscles reducing the risk of damaging nearest structures, such as pleura and vessels.

ESRA Abstracts Regional Anesthesia and Pain Medicine  •  Volume 43, Number 7, Supplement 1, October 2018

ESRA-0247
E-POSTER VIEWING
CHRONIC PAIN MANAGEMENT

DRUG-FREE CHRONIC MUSCULOSKELETAL PAIN MANAGEMENT: THE EFFECTIVENESS OF ULTRASOUND GUIDED DRY NEEDLING.

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Background and Aims: Numerous studies show that chronic nontraumatic neck and shoulder pain is related to the presence of Myofascial Trigger Points (MTrPs). Active MTrPs cause clinical symptoms, and their local and referred pain are responsible for at least part of the patient’s symptoms. These trigger points can cause pain, restricted range of motion, and substantial motor dysfunction. Ultrasound guidance is a useful tool to identify myofascial trigger points with visualization of local twitch response (LTR) and to identify the muscular structures to treat.

Methods: A 50-year-old hairdresser woman came to our observation complaining right neck and shoulder chronic pain. She referred a NRS pain score of 8 at rest raising 10 with movement, affecting her ability to work, McGill Pain Questionnaire= 10 (S6A2V1M1). She refused to take oral drugs. We treated Erector Spinae, Rhomboid Minor and Major, Levator Scapulae, Serratus Anterior, Infraspinatus and Upper Trapezius muscles with ultrasound-guided dry needling once a week for three times.

Results: We observed a reduction of local twitch response and NRS score, decreasing down to 2-3, and an improvement of range of motion, McGill Pain Questionnaire= 5 (S2A1V1M1) with good satisfaction of the patient.

Conclusion: Ultrasound-guided dry needling treatment could be a safe and effective technique in the management of chronic muscle nontraumatic pain. The ultrasound visualization allows to treat even deeper muscles reducing the risk of damaging nearest structures, such as pleura and vessels.

ESRA-0252
E-POSTER VIEWING

CHRONIC PAIN MANAGEMENT

ULTRASOUNDS GUIDED DRY NEEDLING: AN EFFECTIVE TECHNIQUE FOR A LONG TERM RELIEF OF NECK AND SHOULDER PAIN

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Background and Aims: Dry needling is a therapeutic technique in which thin monofilament needles are inserted into muscle eliciting a localized twitch response with the purpose of reducing pain associated with musculoskeletal disorder. These are often caused by the presence of Myofascial Trigger Points (MTrPs). Many RTCs comparing Dry needling with other treatments shows significant improvement in neck and shoulder pain, specifically in short and medium term. Performing DN under ultrasound guidance allows to identify MTrPs and to visualize local twitch response (LTR).

Methods: A 31-years-old tattoo artist woman came to our observation complaining right neck and shoulder chronic pain. She referred a NRS pain score of 8 at rest raising 10 with movement, affecting her ability to work, McGill Pain Questionnaire= 10 (S6A2V1M1). She underwent several session of physiotherapy and taping and took NSAIDs as needed before our visit. We subjected her to 4 sessions of ultrasound guided dry needling: once every two weeks for two sessions and then once a month for the last two ones. We treated Upper trapzezius, Sternocleidomastoid, Levator Scapulae, Semispinalis capitis, Splenius capitis and Cervicles muscles.

Results: We observed a marked reduction of local twitch response and NRS score, decreasing down to 2-3, McGill Pain Questionnaire= 5 (S2A1V1M1). One year follow up confirm absence of pain. The patient was able to return to daily work activities without functional limitations caused by pain.

Conclusions: Ultrasound guided dry needling treatment could be a safe and effective technique in the management of chronic neck and shoulder pain, even in the medium and long term.

ESRA-0377
E-POSTER VIEWING

CHRONIC PAIN MANAGEMENT

HEAD, NECK, AND FACIAL PAIN IN A POLYCYSTIC OVARIAN SYNDROME (PCOS) PATIENT WITH TEMPOROMANDIBULAR SYNDROME (TMS) AND TEXT-KING SYNDROME (TJS)

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Background and Aims: Successful diagnosis and management of patients with chronic headache, neck and jaw pain is frequently a multidisciplinary endeavour. Literature indicates that 86% of PCOS patients can have headache and temporomandibular symptoms.

Methods: A 24-year-old petite, non-obese Italian American woman with an 8-year history of a diagnosis of PCOS was referred for a 9-year history of chronic jaw pain, headaches, and dizziness. Cone beam CT revealed subchondral sclerosis, cysts, and collapse of the roof of the cyst and
compromised TMJ space. MRI revealed synovial tissue thickening due to the inflammation, trabecular microfractures and decreased T1 signal in the narrow, and displaced TMJ meniscus.

**Results:** Medical management included treatment with birth control pills and a unilateral oophorectomy at age 23. Dental referral for biomechanical/orthopedic principles of management to decrease joint stress and decrease muscle hyperactivity included diagnostic trigger point injections of the masseter and anterior temporalis muscles (which provided substantial transient relief) followed by use of a mutually protective occlusive orthotic (MPO) used 24/7. Physical therapy was initiated for the musculoskeletal pain component. The patient had ear region and jaw pain which decreased from a level 10/10 to a level 0-2/10 with treatment.

**Conclusions:** Diagnosis and management of a patient with PCOS who had jaw, neck, and head pain treated with multidisciplinary collaboration optimized the patient's outcome. Splint use, physiotherapy, and proper medical management results in excellent pain reduction and patient outcome, including elimination of pain medication.

**ESRA8-0369**

**E-POSTER VIEWING**

**CHRONIC PAIN MANAGEMENT**

**EPIDURAL ADHESIOLYSIS IN THE MANAGEMENT OF CHRONIC LOW BACK PAIN IN FBSS AND IN LUMBAR RADICULAR PAIN: FIRST YEAR OF EXPERIENCE IN CROATIA**

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**Background and Aims:** To evaluate the efficacy and the feasibility of percutaneous adhesiolysis to reduce pain, to improve daily functions and reduce drugs intake in patient with chronic pain. Chronic radicular pain can be caused by scar tissue, compression, inflammation, swelling disks. Adhesiolysis by placement of a wire-bound catheter into the ventrolateral aspect of the epidural space at the site of the exiting nerve root enables precise application of steroids, hyaluronidase, local anesthetics and saline for the reason of achieving pain relief.

**Methods:** Standard percutaneous epidural adhesiolysis was performed in 54 patients who were divided into two groups: pain from FBSS versus chronic radicular pain without previous spine surgery. Visual analog score, change in pharmacotherapy intake, subjective satisfaction and evaluation of the lysis procedure were observed in pretreatment, in the 4th and 12th week after the intervention.

**Results:**VAS scores for pain were significantly lowered in both groups in the 4th and 12th week. Statistically significantly decrease was expressed in the Radiculopathy group (VAS 0 = 7.5 0.87 / VAS 12th= 4.6 1.05) versus the FBSS group (VAS 0 = 7.6 0.85 / VAS 12th= 5.0 1.58) (p<0.001). Enhancement in short-term pain relief resulted in remarkable reduction in pharmacotherapy intake (p<0.001) and clinical effectiveness rate of >50% was achieved in 27% patients of FBSS and 25% of patient with chronic radicular pain without surgery experience.

**Conclusions:** Considering our small sample, our results in short-term pain relief, suggests that epidurolysis can be an effective method in the treatment of patients with chronic radicular pain like in the patients with FBSS.

**ESRA8-0475**

**E-POSTER VIEWING**

**CHRONIC PAIN MANAGEMENT**

**QUALITATIVE ANALYSIS OF THE COPING MECHANISMS OF PAIN IN WOMEN WITH CHRONIC PELVIC PAIN**

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**Background and Aims:** Introduction: Chronic pelvic pain in women is defined as a condition that generates disabilities in affected individuals, such as interferences in quality of life, deficits in the efficiency of work activities, and impairments in the interaction with the social environment. Our aim was to understand the mechanisms of coping with pain in women with chronic pelvic pain. Methods: We included women undergoing treatment of chronic pelvic pain. Open-ended interviews were audiotaped and transcribed in full for later analysis of the data, and the texts submitted to thematic analysis with the help of the “RQDA” software.

**Results:** Sixty-seven open interviews were conducted. The thematic analysis allowed us to categorize six major themes related to the way women dealt with the pain experience: 1. Losing autonomy over daily life activities; 2. Living as a function of pain; 3. Self-management of pain; 4. Isolate from social interaction (work, family, marital and friends); 5. Adopt strategies based on emotion; 6. Adopt self-medication.

**Conclusions:** Based on the qualitative approach of the thematic analysis, we were able to identify the means that women used to deal with pain. Our hypothesis is that the lack of understanding about how to deal with pain and the failures of adherence to the proposed therapies corroboreto the resigned behavior and, evolve to the social isolation, strengthening the personal and psychological introspection, and consequently causing non adherence of therapies.

**ESRA8-0299**

**E-POSTER VIEWING**

**CHRONIC PAIN MANAGEMENT**

**THE EFFICIENCY OF BOTULINUM TOXIN IN TREATMENT OF OVERACTIVE BLADDER IN PATIENTS WITH MYOFASCIAL PAIN SYNDROME OF PELVIC FLOOR**

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**Background and Aims:** We sought to estimate the efficiency of BTA in treatment of overactive bladder in patients with myofascial pain syndrome of pelvic floor.

**Methods:** Fifty females aged 21-45 years (average 29.8±6.8) participated in study. All had pain syndrome in pelvic floor and frequent urination. All participants filled a voiding diary. For all patients we performed cystometry. We evaluated tone of levator ani muscles with vaginal manometry. Pelvic floor muscles were evaluated with palpation and their tone was estimated with Lamont scale. All participants underwent BTA injections into the trigger points of pelvic floor muscles. Dose of BTA was depended on tone with Lamont scale. The results were estimated 3 months later.

**Results:** According to the diary of urination before the treatment, it was 25/day (15-45), and 14/day (8-20) after the injections. The results of cystometry before and after treatment accordingly were: Vaginal Pressure 39.26 (75-104 cm Hg) and 64.06 (55-75 cm Hg), the primary urge 90 ml (80-105 ml) and 160 ml (140-180 ml); Max cystometric capacity was 210 ml (180-250 ml) and 280 ml (210-350 ml). Average muscle tone before the treatment was: m.levator ani left 2.13; right 2.06; m. obt.int. left 0.73; right 0.93; urethra 1.06; bladder trigonum area 2.13 and after treatment m.levator ani left 0.46; right 0.46; m. obt.int. left 0.13; right 0.26; urethra 0; bladder trigonum area 0.73.

**Conclusions:** Our study showed that the bladder capacity increased. The amount of urination during the day decreased and approached normal values, as well as pain in pelvic floor muscles with the use of high doses of BTA.
Background and Aims: The use of placebo in clinical studies is used to detect if a tested active medication is superior to placebo in terms of NRS/VAS pain scoring (the most conventional study primary endpoint). Randomized, double blind, placebo controlled studies represent the gold standard in neuropathic pain clinical research. Such study designs are recommended by regulatory guidelines. The aim of this research is to analyse the clinical relevance of placebo/ additional arm in chronic neuropathic pain studies.

Methods: An extensive research of chronic neuropathic pain studies in phase 1-2-3 was carried out from 2000 up to date. A retrospective study across 2 hospital sites for 6 months looked at the evidence from early phase 2 and Proof of Concept (PoC) will serve for GO/NO GO decision and phase 3 chosen indications.

Conclusions: Adaptive, randomized, placebo controlled withdrawal are examples of innovative study designs in chronic neuropathic pain (see mirogabalin phase 2 and tapentandol phase 3 in diabetic neuropathy and the sodium channel blocker CNV1014802 phase 2 in trigeminal neuralgia, a very severe form of facial pain).

ESRA8-0413
E-POSTER VIEWING

CHRONIC PAIN MANAGEMENT

'A CLINICAL DEVELOPMENT PLAN FOR A NEWLY INVESTIGATED NEUROPATHIC PAIN MOLECULE LOOKING AT A CLEAR GO/NO-GO DECISION BASED ON IMAGING, BIOMARKERS AND PATIENT CLUSTERS'


Background and Aims: Rather than a conventional and sequential phase 1 research (Single Ascending Dose/Multiple Ascending Dose/Food Effect/Bioavailability) an umbrella dynamic study approach is recommended. As proposed package for exploratory research, the clinical development plan should investigate on the appropriate analgesic signal since early phase 1/2a in small number of patients.

Methods: A neuropathic pain model study searching for pain thresholds and biomarkers in different patient clusters (this might also include an inflammatory mixed pain model) should focus on a small number of healthy volunteers and on neuropathic pain patients. Based on the proposed Mechanism of Action of the new molecule, the clinical development plan should focus on the most appropriate target indication for phase 2 (Target Product Profile).

Results: Phase 2 will be a placebo controlled study driven by Quantitative Sensory Testing Analysis for patient stratifications (QST include: 1) electrical, 2) chemical, 3) mechanical (sub-groups will include pressure, punctate/brush, and vibratory) and 4) thermal stimulus. Biomarkers will be also assessed as exploratory. The evidence from early phase 2 and Proof of Concept (PsC) will serve for GO/NO GO decision and phase 3 chosen indications.

Conclusions: A typical global phase 3 program includes two confirmatory studies on selected neuropathic pain indications (peripheral and/or central). The study design will include one or two dosing/regimens of the investigational drug, the active comparator as standard of care and the placebo arm. In Europe multiple peripheral neuropathic pain indications can be included in the same study population (i.e. painful diabetic neuropathy and post-herpetic neuralgia).

ESRA8-0181
E-POSTER VIEWING

CHRONIC PAIN MANAGEMENT

OUTCOMES USING AN SCS DEVICE CAPABLE OF DELIVERING COMBINATION THERAPY (SIMULTANEOUS OR SEQUENTIAL) AND ADVANCED WAVEFORMS / FIELD SHAPES

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Background and Aims: As advanced spinal cord stimulation (SCS) systems continue to come "online", it will be important to evaluate how patients use these devices and their associated clinical outcomes. The aim of this study is to assess patient outcomes using a new SCS System designed to offer patients the capability of personalizing SCS by offering combination therapy (simultaneous or sequential) and waveform automation.

Methods: This is a consecutive, multi-center case-series of patients treated with an SCS system (Precision Spectra WaveWriter, Boston Scientific) capable of combination therapy (either sequential or simultaneous), multiple waveforms and advanced field shapes, and waveform automation for low back and/or leg pain. Data collection includes: 1) Baseline characteristics: demographics, medical history, pain diagnosis 2) procedural information: lead configuration, programming parameters; and 3) pre- and post- implant numerical rating scale pain intensities (0-10 NRS).

Results: To date, 79 patients have been analyzed. A statistically significant improvement in overall targeted pain scores (NRS) at last follow-up was reported (Baseline NRS: 7.7; at last follow-up NRS: 1.7; p < 0.0001). Fifty-seven percent of all patients indicated 81 – 100% improvement in overall targeted pain at their last follow-up. Twenty-nine percent (23 of 79) of patients reported pain free (NRS = 0) at last follow-up.

Conclusions: Given the overall diversity of etiologies associated with chronic pain, the SCS-implanted patient population is thought to be one that may particularly benefit from devices with adaptability providing for individualized treatment customization. This study offers initial insights regarding use of an SCS system capable of combination therapy and waveform automation.

ESRA8-0102
E-POSTER VIEWING

CHRONIC PAIN MANAGEMENT

RADIATION EXPOSURE IN PATIENTS UNDERGOING PROCEDURAL INTERVENTIONS FOR PAIN RELIEF

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Background and Aims: There is an increase in the number of procedures being performed for pain management. Large proportion of patients are subjected to higher and repeated exposure to radiation. There is no National Guidelines for Pain procedures and Radiation exposure in UK. The aims of our audit were to investigate the radiation exposure to patients undergoing Lumbar medial branch blocks, to measure radiation parameters |Screening time and Dose area product (DAP) values|, to find variation in practice between consultants and compare with published data (reference level).

Methods: A retrospective study across 2 hospital sites for 6 months looked at radiation exposure in patients undergoing bilateral L3, L4, L5 medial branch blocks performed by 5 pain consultants (A, B, C, D, E). We took reference value as DAP = 2.5 Gycm2 and screening time - 60 sec. Results: Data collected from 40 patients showed screening time < 60 seconds in all, DAP <2.5 Gycm2 in 32 patients and DAP >2.5 Gycm2 in 8 patients.

| Table: Results for each consultant |
|---|---|---|---|---|---|
| | Screening time (sec) | A | B | C | D | E |
| Dose (Gy.cm²) | | | | | | |
| 1.59 | 1.48 | 2.25 | 1.61 | 2.52 |

Conclusions: Screening time for 100% of our patients and DAP value for 80% of our patients were below reference level. Our recommendations were to limit radiation exposure in patients to reference values and aim for local guidance until national guidelines available.


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CRONIC PAIN MANAGEMENT

ESRA-0481

E-POSTER VIEWING

TRANSFOMINAL EPIDURAL INJECTION OF LOCAL ANESTHETIC AND DORSAL ROOT GANGLION PULSED RADIOFREQUENCY TREATMENT IN LUMBOSACRAL RADICULAR PAIN: A RANDOMIZED, TRIPLE-BLIND, ACTIVE-CONTROL TRIAL

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Background and Aims: Lumbosacral radicular pain (LRP) is one of the most frequent types of low back pain. LRP results from inflammation and irritation of lumbar spinal nerves and dorsal root ganglion (DRG). This study compares the efficacy of transfominal (TF) epidural local anaesthetic and DRG pulsed radiofrequency (PRF) treatment in Lumbosacral Radicular pain.

Methods: After ethical committee approval, patients having LRP with failed conservative management > 3 months first received selective diagnostic nerve root block with 1 ml 2% lignocaine. Patients showing positive response were divided into two groups. Group LA received TF epidural 1 ml of 0.5% bupivacaine. Group LPRF received TF epidural 1 ml of 0.5% bupivacaine with DRG PRF (180 s). More than 20-point reduction in 0-100 point Visual Analogue Scale (VAS) at two weeks, 1, 2, 3 and six months and improvement in functional status as measured by Modified Oswestry Disability Questionnaire (MODQ) at respective time interval were compared.

Results: Statistically significant reductions in VAS and MODQ were seen in LPRF group compared to LA group from 2 weeks to 6 months. More than 20 point decrease in VAS was found in 100% patients in LPRF group at all time intervals up to 6 months whereas it was 80% and 28% patients in LA group at 3 and six months. Reduction in ODI percentage was observed more in LPRF group.

Conclusions: Pulsed radiofrequency of DRG applied for a more extended duration results in long-term pain relief and improvement in the functional quality of life in patients with lumbosacral radicular pain.

ESRA-0349

E-POSTER VIEWING

CHRONIC PAIN MANAGEMENT

CASE REPORT: BILATERAL DAMAGE OF THE INFERIOR ALVEOLAR NERVES AFTER DENTAL IMPLANT PLACEMENT

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Background and Aims: Several complications during dental implant placement have been recognized, including nerve injury. Inferior alveolar nerve damage seems to prevail, yet there are no conclusive data regarding incidence and management of subsequent provoked neuropathic orofacial pain.

Methods: Case report: A 70 year old female patient presented in the Pain Center of our Hospital with a one-month history of burning sensation in the inferior lip, following 4 dental implants placement. During the procedure she described an excruciating pain, numbness and a burning sensation, being at that time managed with NSAIDs, which proved to be inefficient. 48 hours later a CT scan revealed a severe bilateral injury of the inferior alveolar nerves and a left inferior alveolar artery puncture. As such implants were extracted 15 days later.

Results: At the time of clinical assessment in the Pain Center, patient presented with numbness and a burning sensation in the inferior lip with absence of cutaneous sensation, as assessed by pinprick and temperature sensitivity tests. Pain intensity score was 9 (NPRS) and the patient was prescribed treatment with pregabalin and duloxetine for pain management. In the first follow-up she reported a decreased pain intensity (NPRS 7), yet the numbness and the burning sensation were still present. It was then decided to bilaterally infiltrate the inferior alveolar nerves with dexametathasone (4mg).

Conclusions: Fifteen days later all symptoms abated (NPRS 3) and two months later carbamazepine was added to the analgesic scheme. Seven months after initial assessment patient was symptoms free and a stepping down pain treatment followed.

ESRA-0128

E-POSTER VIEWING

CHRONIC PAIN MANAGEMENT

THE OUTCOME OF JOINT INJECTIONS IN PATIENTS WITH OSTEOARTHRITIC PAIN


Background and Aims: Symptomatic osteoarthritis generally affects up to 15% of the population worldwide with the knee, hand, and hip being the most common sites. Severe or refractory pain is one of the indications for arthroplasty. Pain management with intra-articular injections may offer symptomatic relief for such patients.

Methods: We treated 110 patients suffering from OA-joint affecting the shoulder, knee or hip joints, with an intra-articular injection of 120 mg Dexamethasone and 0.25% Levobupivacaine. Each patient was asked to complete a Pain Numeric Scale (PNS) at baseline and thereafter each week for a total of 12 weeks.

Results: The mean baseline pain score was 8.04 (shoulder), 8.03 (hip) and 7.8 (knee). The mean weekly pain intensity was reduced in all patients with the highest pain relief achieved at week 5 for hip (4.9) and shoulder (4.6), and week 4 for knee (3.9) pain. Pain scores increased weekly and reached 6 for the shoulder, 6.5 for the hip and 6.1 for the knee at week 12. The mean reduction in pain scores was 38%, 34% and 32.6% for knee, shoulder and hip respectively.

Conclusions: Our case studies showed that intra-articular injections provided up to 38% reduction in pain, with no side effects reported. We conclude that intra-articular injections have several benefits. Their role in the reduction of moderate to severe pain due to osteoarthrits may delay the requirement of surgical interventions such as arthroplasty, with subsequent implications on cost reduction through revision surgery. It also offers an alternative to individuals in whom arthroplasty is deemed unsuitable or risky.
low, but significantly higher in group A patients one and three months later. Two group A and one group B patients removed patch, because of excessive burn and erythema, while one group B patients discontinued pregabalin.

Conclusions: Capsaicin patch 8% monotherapy appears effective on the first two weeks after application, but its combination with pregabalin seems more effective later on. Further studies are needed to support these findings.

Conclusions: GON cryolesion can be an effective method in migraine headache treatment.

ESRA-0187
E-POSTER VIEWING

CHRONIC PAIN MANAGEMENT

IMPROVED LOW BACK PAIN RELIEF BY ALLOWING PATIENTS THE CHOICE OF CONVENTIONAL RATE (40-60 HZ) PARESTHESIA PROGRAMMING VERSUS HIGHER RATE (1,000-1,200 HZ) SUBTHRESHOLD PROGRAMMING

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Background and Aims: Recent advances in spinal cord stimulation (SCS) systems now allow for different waveforms/modes of neurostimulation and improved neural stimulation field targeting (eg. anatomically-guided 3D neural targeting [3DNT]). We examined how chronic low back pain patients clinically responded to SCS leads placed from T6-T7 using both conventional rate (40-60Hz) paresthesia and higher rate (1,000-1,200Hz) subthreshold programming.

Methods: This is a single-site, case-series (N = 113) consisting of patients who underwent a 72-hour SCS trial and subsequent implant using a multiple waveform SCS system (Precision Spectra, Boston Scientific) with leads placed mid-line from T6-T7. During the first 24-hours of the trial, 3DNT paresthesia-based programming was used to maximize pain/paresthesia overlap at standard rates (f=40-60Hz, pw=210-250µs). For second 24-hours, a higher rate program (1,000-1,200Hz) was used at subthreshold amplitudes with pulse width decreased ~50%. The conventional and/or subthreshold program was used for the final 24 hours.

Results: Mean NRS at baseline and last follow-up (mean duration: 155.2 days) were 7.9 and 1.5, respectively (delta=6.3, p<0.001) for 113 patients. 42% of patients (47/113) reported no pain (NRS=0) and 49% (55/113) reported 91-100% pain relief at last follow-up. Statistically significant (p <0.001) pain relief at last follow-up by patient waveform preference is also reported.

Conclusions: Proper patient selection, positioning of leads, SCS trial optimization, and implant experience (Murphy KR et al. 2017) all contribute to clinical outcomes. A statistically significant NRS improvement was reported at last follow up in this cohort. At last follow-up, >76% of patients reported NRS≤2 and 49% reported 91-100% pain relief.

ESRA-0188
E-POSTER VIEWING

CHRONIC PAIN MANAGEMENT

POSTERIOR LUMBAR/SACRAL NERVE ROOT STIMULATION FOR TREATMENT OF CHRONIC FOOT AND/OR ANKLE PAIN

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Background and Aims: Chronic focal pain relief has been reported using Dorsal Root Ganglion (DRG) stimulation. However, a high incidence of adverse events associated with this technique has been documented. Effective treatment of groin and pelvic pain using stimulation with leads over the L1 dorsal nerve root has recently been reported. We therefore evaluated outcomes of proximal dorsal somatic nerve root stimulation as an alternative method for chronic foot/ankle pain.

Methods: This is a single-center, case-series evaluating patients with chronic foot/ankle pain diagnosed with Complex Regional Pain Syndrome or Diabetic non-Diabetic peripheral neuropathy (N=9). Patients were implanted with a neurostimulator capable of anatomically-guided (3D) neural targeting (3DNT, Precision Spectra, Boston Scientific). Using a previously described technique, leads were placed antegrade through the sacral hiatus within a range of L5-S1.

Results: A 6.3-point reduction in NRS (p=0.0001) was reported at mean last follow-up duration=315.6 day. 55% (5/9) of patients reported 91-100% improvement in their pain and 44% (4/9) reported no pain (NRS=0) at last follow up. Additionally, >75% (7/9) of patients reported NRS≤1, 56% preferred standard rate and 44% preferred higher rate stimulation.
Conclusions: DRG stimulation may be associated with additional risks in addition to a more complex procedure. This small case-series demonstrates that neurostimulation within the L5-S1 range using 3DNT is a viable option to treat focal foot/ankle pain.

ESRA-0493
E-POSTER VIEWING
CHRONIC PAIN MANAGEMENT
EPIDURAL CATHETER TUNNELING FOR OUTPATIENT PAIN CONTROL WITH THE PATIENT ADVANCED SPINAL SARCOMA
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Background and Aims: Cancer pain is debilitating and in some cases due to the aggressiveness of the tumor it is refractory to conventional clinical treatments due to the high nociceptive stimulus.
Methods: Case report.
Results: 28-year-old male patient with advanced spinal sarcoma with exophytic lesion measuring approximately 15cm in the longitudinal direction with extension of T4 to T10, presenting motor deficit in the lower limbs and pain of strong intensity, continuous, throbbing with visual analog scale 10/10. Stratified and adjusted the medications already in use GABAPENTINA, dolutegrine, transdermal fentanyl and morphine. Scheduled re-evaluation with 72 hours observing a slight improvement of the pain EVA 8/10. Due to the little improvement and the unavailable ability of intrathecal morphine pump, epidural L1-L2 was performed with an infusion of 8 ml of 0.25% ropivacaine and 2 mg of morphine in a monitored bed. After 1h a re-evaluation was performed and improvement of the pain picture was observed and with 24h the patient reported being without EVA pain 0/10. Positioning of the catheter was performed with a bolus administration of 2mg of morphine, 0.25% ropivacaine 10mL, 10mg depot dexamethasone and 30mcg clonidine. Due to the hospital discharge schedule the patient was directed to the outpatient administration of local anesthetic associated with morphine via epidural catheter.
Conclusions: The tunnelling of the epidural catheter for analgesia with local anesthetics, adjuvants and opioids should be considered as a low-cost, minimally invasive and user-friendly option for the outpatient control of refractory pain.

ESRA-0367
E-POSTER VIEWING
CHRONIC PAIN MANAGEMENT
CERVICAL FORAMINAL STEROIDS INFILTRATION USING ULTRASONOGRAPHIC TECHNIQUE FOR THE TREATMENT OF CERVICAL RADICULALGIA/ A RETROSPECTIVE STUDY
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Background and Aims: Cervical Foraminal Steroids Infiltration (CFSI) is indicated in cervico-brachial radicular pain, resistant to conservative treatment. It was performed under fluoroscopic or CT scanner control, with beneficial reported effects1.
However, severe neurological complications following radioguided injections have been reported2. Studies demonstrating the effectiveness and safety of CFSI using ultrasonographic technique are limited3,4,5.
The primary endpoint of this retrospective study was to evaluate the efficacy of CFSI performed under ultrasonography. We secondarily assessed the associated complications of the technique.
Methods: After ethic committee approval (O.M. 007), 194 patients were included in the study, between January 2016 and October 2017. Identification of the predetermined target level (depending on cervical vertebrae anatomy) and the foramen was performed under ultrasound guidance (Table 1). Infiltration was realised after adequate needle position.

Efficacy was defined by visual analog score (VAS) assessment, before and after CFSI. Safety was investigated with early or late complications. Statistical analysis was realised by T-test, Wilcoxon and Pearson’s Chi2. Data are presented as mean ± standard deviation (SD), p < 0.05 was considered significant.
Results: Echoguided CFSI were found efficient reducing VAS in DN4 positive (6 [5 – 8] to 0 [0 – 3]) and DN4 negative patients (7 [6 – 8] to 0 [0 – 3]; p: 0.948). Diabetics patients response to treatment was not significantly different (p=0.153). 6.7% of patients showed early complications. No late complications were observed.
Conclusions: CFSI using ultrasound seems to be an efficient and safe technique. It may be beneficial also for patients with DN4 negative score and diabetes.

ESRA-08-0502
E-POSTER VIEWING
CHRONIC PAIN MANAGEMENT
RADIOFREQUENCY ABLATION OF GENICULAR NERVES PROVIDES BETTER AND LONGER DURATION OF PAIN RELIEVE WHEN COMPARED TO INTRAARTICULAR CORTICOSTEROID INJECTION
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Background and Aims: Osteoarthritis of knee is a frequent problem in aged patients and its related to high morbidity. We aimed to compare the results of two different treatment techniques of radiofrequency ablation of genicular nerves (GNRF) and intraarticular corticosteroid injection (IACS) in the treatment.
Methods: Following institutional ethics committee approval and consent of the patients with knee pain, patients received either intra-articular tramcinolon-acetat 40mg or conventional GNRF (0.2-0.5mV RF performed 95sec at 75°). The randomization depended on the availability of RF needles in the institution. Patients Visual Analog scores were recorded before and after the procedure and patients were followed 3 months. Student’s t test applied for statistical analysis.
Results: IACS performed to 55 patients aging 62±12.4 years and GNRF applied to 30 patients aging 66.9±8.8 years.
High satisfaction reported by 80% and 38 % of patients and dissatisfaction reported by 3% and 18% in GNRF and IACS groups respectively.

Table 1: VAS scores during follow-up.

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Pre Procedure</th>
<th>Immediately after</th>
<th>1 hr after</th>
<th>4 wk after</th>
<th>12 wk after</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAS (move/rest)</td>
<td>7.9±1.7</td>
<td>4.2±1.0</td>
<td>3.1±1.0</td>
<td>2.7±1.7</td>
<td>2.7±1.7</td>
</tr>
<tr>
<td>VAS (move/finish)</td>
<td>6.7±1.5</td>
<td>4.0±1.0</td>
<td>3.1±1.0</td>
<td>2.5±1.0</td>
<td>2.7±1.0</td>
</tr>
<tr>
<td>p</td>
<td>0.68</td>
<td>0.0004</td>
<td>0.0004</td>
<td>0.0004</td>
<td>0.0004</td>
</tr>
</tbody>
</table>

Conclusions: Similar to the Davis et al study, we found that GNRF is an effective long-term therapeutic option when compared to IACS injection which provides shorter term of treatment.

ESRA-0232
E-POSTER VIEWING
CHRONIC PAIN MANAGEMENT
COOLED VERSUS CONVENTIONAL RADIOFREQUENCY FOR SACROILIAC JOINT DENERVATION: RETROSPECTIVE STUDY WITH 24 MONTHS FOLLOW UP
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Background and Aims: Radiofrequency (RF) denervation of S1, S2, S3 and L5 dorsal Ramus has been showed to be effective in reducing pain from sacroiliac joint (SIJ).Cooled RF is a novel modality of RF which works at lower temperature creating bigger lesions compared with conventional RF. We
compared Cooled RF with a conventional RF (CRF) device for SIJ denervation. No study has compared this devices for more than 12 months follow up.

Methods: Retrospective study including 43 patients: 21 treated with CRF (Group A) and 22 with Cooled RF (Group B). Follow up at 1-6-12-24 months analyzing pain score (NRS) and Oswestry Disability Index. Patients had severe pain (mean basal NRS >7) resistant to conventional treatment. Ethic committee approval was obtained.

Results: Successful outcome (pain relief > 50%) was achieved in > 90% of all patients without differences between the two groups at 1 month. Even if both groups showed significantly lower pain and disability scores at all follow ups compared to baseline, Cooled RF showed a longer pain relief (fig.1 and 2) compared with CRF at all follow ups both for pain and disability. At 24 months 41% of patients treated with Cooled RF had a successful outcome compared to 19% of patients treated with CRF.

Background and Aims: Tonsillectomy is one of the most common procedure in pediatric population. It is associated with significant pain and postoperative pain control is often unsatisfactory.

The aim of our study is to assess the use of ketamine and compare it with its combination with fentanyl for postoperative analgesia in pediatric tonsillectomy.

Methods: This is a prospective randomized double-blind trial.

After obtaining the approval of Research Ethical Committee, and after informed parents’ consent, a total of 60 ASA I and II children aged between 2 and 12 years old were included in this study.

A standardized anesthetic techniques were used. Every child was randomly assigned into Group I (receiving 2 μg/kg of fentanyl), Group II (receiving 0.5mg/kg of Ketamine) or Group III (receiving a combination of 1μg/kg fentanyl with 0.25 mg/kg of Ketamine).

Pain intensity evaluated by FLACC scale, frequency of postoperative supplement analgesic consumption, and the occurrence of incidents during the stay in PACU were assessed and recorded.

Results: Group II and III have tendency to have the lowest pain level the moment they arrived to PACU. The study of pain score evolution showed the superiority of Group III with a significant difference in 30 mn: P = 0.042 compared to ketamine and P = 0.014 compared to fentanyl. The requirement of supplement analgesia was more recorded in Group I but without a significant difference.

Conclusions: After a child’s tonsillectomy, ketamine in association with fentanyl provides the best satisfactory postoperative analgesia without adding side effects.

ESRA Abstracts
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ESRA8-0393
E-POSTER VIEWING

PEDIATRIC

CASE REPORT: CONTINUOUS BILATERAL QUADRATUS LUMBORUM BLOCKS IN AN INFANT

Berick C. Queen Silvia’s Paediatric Hospital- Sahlgrenska University Hospital, Anaesthesia & Intensive Care, Göteborg, Sweden.

Background and Aims: Quadratus lumborum block (QLB) is becoming popular in paediatric anaesthesia but few mentions of continuous QLB exist.

Our patient was born at week 36, with bladder exstrophy. He had surgery first at birth, and 2 months later for duodenal stenosis. Now, at 6 months, weighing 6.5 kg he had surgery again to close the bladder and the abdominal wall, and bilateral pelvic osteotomies to make it possible. Postoperatively he was confined to the supine position with the legs elevated in a stretching device to release tension in the surgical area.

Because of vertebral malformations (upper thorax and lower part of sacrum) any central block was deemed contraindicated. Perioperatively large doses of fentanyl was given. Postoperatively he was kept intubated in PICU until stable analgesia and respiration, which turned out to be difficult to achieve. (Table 1)

Methods: At day 2, I performed bilateral QLB blocks with catheters. The catheters were secured with Dermabond® mini, and Tegaderm®. For practical reasons I did a transmuscular QLB on the right side and a QLB type 2 on the left side. (Fig 1-2) Because of surgical dressings both injections were done from medial aiming laterally. Starting doses were 2.5 ml of levobupivacaine (1.6 mg/ml) on each side. Thereafter 3 ml levobupivacain (0.625 mg/ml) every 4th hour.

Results: The patient became calmer and other analgesics could be withdrawn step by step. (Table 1) Ventilator weaning went smoothly. Catheters were withdrawn after 9 days. No side effects were noted.

Conclusions: Continuous QLB seems applicable also in infants.

ESRA8-0372
E-POSTER VIEWING

PEDIATRIC

KETAMINE ASSOCIATED TO FENTANYL FOR ANALGESIA AFTER TONSILLECTOMY IN CHILDREN

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e184
ESRA8-0488  
E-POSTER VIEWING

PEDIATRIC

WOUND CATHETERS AND INFUSIONS IN THE PAEDIATRIC CRITICAL CARE SETTING: AN AUDIT OF THE LAST 50 CONSECUTIVE CASES

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Background and Aims: The 23-bed tertiary-referral Paediatric Intensive Care Unit (PICU) in Our Lady's Children's Hospital (OLCHC) admits 1100 infants and children per year, many of whom are postoperative. Over the past 5 years, insertion of wound catheters at the end of major general, thoracic, orthopaedic and cardiothoracic procedures has become routine practice. Children admitted to PICU receive continuous infusions of local anaesthetic medication for their postoperative pain relief. We wished to study this change in practice to describe current practice and identify areas for improvement and future practice development.

Methods: We used our existing patient data management system (ICIP Philips) to identify patients who received analgesia via a wound catheter. We identified the last 50 cases as a recent unselected sample and interrogated the data management system for 15 variables, relating to nursing care of the catheter, quality of analgesia, requirement for additional opioid analgesia and complications or problems relating to the use of the catheters. Our institutional ethics committee waived approval as it is an audit of current practice.

Results: Fifty patients were retrieved with complete data, admitted over the past 15 months. All patients had the catheter inserted under direct vision, in the operating room, before the completion of surgery. Post-thoracic surgery was the most frequent admitting diagnosis (32/50), with decortication the most frequent. The mean length of continuous local anaesthetic infusion was 60 hours and 46 patients received additional opioid medication.

Conclusions: Our audit suggests that wound catheter-based infusions contribute to postoperative analgesia in the PICU, and are well-tolerated by children in PICU.

ESRA8-0166  
E-POSTER VIEWING

PEDIATRIC

NOVEL USE OF SUPERFICIAL CERVICAL PLEXUS BLOCK AND PECS I BLOCK FOR VAGAL NERVE STIMULATOR IMPLANT SURGERY IN A PAEDIATRIC PATIENT – A CASE REPORT

Long M, Tan T.Y.S. KK Women’s and Children’s Hospital, Paediatric Anaesthesia, Singapore, Singapore.

Background and Aims: A 5-year-old girl, 17.5kg with a history of refractory infantile epilepsy, presented for an elective vagal nerve stimulator implant surgery. Despite being on multiple anti-epileptic drugs, she had up to 20 episodes of seizures per day. She is non-verbal and communicates discomfort by pointing or making incomprehensible noises.

Methods: Patient was induced with IV Propofol 60mg, Fentanyl 30mcg and Atracurium 8mg and intubated with a McGrath video-laryngoscope. An intra-arterial cannula was inserted for haemodynamic monitoring. After intubation, a left superficial cervical plexus block and PECS I block was performed aseptically using an in-plane approach with a Pajunk 50mm needle under ultrasound (Sonosite, M-Turbo) guidance. Levobupivacaine 0.25% 2mls and 8 mls were given respectively for the superficial cervical plexus and PECS I block after negative aspiration for blood. IV Paracetamol 250mg (15mg/kg) and IV Fentanyl 40mcg (2.3mcg/kg – including 30mcg given at induction) were administered intraoperatively.

Results: The child was monitored in the Post Anaesthesia Care Unit (PACU) for immediate postoperative complications. She remained comfortable during recovery and did not show any signs of discomfort over the operation sites. She was discharged to the high dependency unit and prescribed regular Paracetamol and Ibuprofen. Her FLACC pain scale was 0 both after surgery and on Post-Operative Day (POD) 1 with oral Paracetamol. She was discharged well on POD 2.

Conclusions: The combination of superficial cervical plexus block and PECS I block is an effective means of providing peri-operative analgesia for vagal nerve stimulator implant surgery in paediatric patients.
ESRA8-0178
E-POSTER VIEWING

PEDIATRIC

TARSAL CANAL BLOCK FOR CLUBFOOT SURGERY IN CHILDREN


Background and Aims: Clubfoot (CLB), is a common congenital foot deformity in children. The initial treatment is conservative. When surgery is indicated, it’s performed under general anaesthesia associated with a regional block (usually caudal or a popliteal sciatic block). Tarsal canal block (TCB) is a new ultrasound guided approach of the posterior tibial nerve (PTN) which consists to deposit local anesthetic (LA) below the fascia that overhangs the PTN avoiding the neurovascular bundle.

Methods: Twenty-two children scheduled for CLB surgical repair were included in this study. Blocks were performed in intubated asleep children (propofol without opioids). A linear probe was placed on the medial side of the leg, above medial malleolus. An out-of-plane injection of 0.3ml/kg of 0.2% BUPIVALCaine with 1:100,000 of epinephrine below the fascia that overhangs the PTN and while removing the needle we deposited 0.1ml/kg of the same mixture above this fascia. We assessed surgical analgesia, incidents, complications and postoperative pain using the FLACC score every 6 hours during the first 24 hours. All children received 200 μg/kg dexamethasone intravenously at induction and had an oral postoperative multimodal analgesia regime combining: paracetamol (15mg/kg/6 hours) and ibuprofen (10mg/kg/8h).

Results: Mean age was 2.3 years (1-9), and average weight 17.8kg (10-30). Six children needed intraoperative analgesia supplement (27%), but none in postoperative. Early oral feeding was achieved without problems in all patients (H3) except two who presented postoperative vomiting.

Conclusions: Integrated in a multimodal pain relief strategy the TCB allowed optimal perioperative pain management in children undergoing CLB surgery. This diffusion approach minimises the risk of vascular and nerve damage.

ESRA8-0160
E-POSTER VIEWING

PEDIATRIC

POST-OPERATIVE PAIN MANAGEMENT IN CHILDREN WITH PATIENT CONTROLLED LOCAL ANESTHETIC WOUND INFUSION

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Background and Aims: In the recent years local anesthetic wound infusion has become an efficient method of postoperative pain treatment in the various surgical areas. Although this method has shown promising results in adults, the use in children is still limited. The aim of our study was to investigate the effectiveness and safety of post-operative pain management with patient controlled local anesthetic wound infusion in children.

Methods: Ten patients in our pediatric surgery department underwent orthopedic surgery under general anesthesia and local anesthetic wound infusion was used for post-operative pain management. Catheter (IntraLong PAU/IN®) was placed into the layer between bone and muscles. After the wound closure the PCA pump was connected and delivery of local anesthetic levobupivacaine 0.25% and 1.25 μg/ml of fentanyl solution was started. Pain was evaluated using VAS scores every 3 hours, up to 48 hours when catheter was removed.

Results: Four patients needed additional pain treatment with NSAID’s and six didn't. Postoperatively VAS scores in both groups were low: 0-2 during 24 hours and 0-3 during next 24 hours. No complications such as wound infection or systemic toxicity were reported.

Conclusions: Patient controlled wound infiltration with local anesthetic is extremely effective for post-operative pain management in children. The use of local anesthetics instead of opioids prevents from opioid related side effects, reduces nursing work, and allows better patient mobility. It may be sufficient as a single method of postoperative pain management for pediatric patients undergoing orthopedic surgery.

ESRA8-0479
E-POSTER VIEWING

PEDIATRIC

CASE REPORT: ULTRASOUND GUIDED PERIPHERAL NERVE BLOCKADE REDUCES HALOTHANE AND IMPROVES POST OPERATIVE ANALGESIA FOR PAEDIATRIC TRAUMA. A FIRST AT MARSBABIT GENERAL HOSPITAL, KENYA

Valentine P., Jewell W., Hunt R. Royal Cornwall Hospital NHS Trust, Anaesthetics, Truro, United Kingdom.

Background and Aims: We report our experience providing ultrasound guided peripheral nerve blockade to provide anaesthesia and postoperative analgesia for Paediatric Trauma Surgery at Marsabit General Hospital, Kenya.

Methods: Our report concerns a 12-year-old girl who was hit by a vehicle suffering a femoral fracture. With our visiting trauma team, we were able to avoid the 550km journey to Nairobi and instead provide ORIF locally – a Marsabit General Hospital first.

Conclusions: Using our local interpreter, anaesthesia was induced with Propofol and Fentanyl, then maintained with Halothane with the girl spontaneously breathing on an LMA. Using ultrasound with an in-plane approach we provided Femoral, Anterior Obturator and Lateral Cutaneous Nerve blockade using 15 ml of 0.5% Levo-Bupivacaine + 1:400,000 Adrenaline, with 3.3mg intravenous Dexamethasone to maximise block duration.

Results: We delivered a quality anaesthetic with a minimal dialled inspired concentration of Halothane between 0.5% and 0.7% (no gas analysis available - so high flow was used to ensure no CO2 rebreathing therefore we assumed our inspired concentration of volatile similar to the dialled). The girl was given Paracetamol, Ibuprofen and Codeine postoperatively. She was comfortable immediately post op and at 24h post op. She was able to mobilise with physio support at 48 hours post op.

Conclusions: Ultrasound guided regional anaesthesia can be used safely and effectively in paediatric surgery in resource poor sites such as at Marsabit General Hospital. Benefits suggested by this case include improved safety, improved surgical conditions, reduced volatile use and good postoperative analgesia.

ESRA8-0346
E-POSTER VIEWING

PEDIATRIC

A RETROSPECTIVE AUDIT COMPARING PERIPHERAL NERVE CATHERETERS TO LIDOCAINE PATCHES FOR POST-OPERATIVE ANALGESIA FOLLOWING EAR RECONSTRUCTION SURGERY

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Background and Aims: Ear reconstruction surgery involves harvesting of four rib cartilages to produce an ear-shaped structure. At our centre, post-operative pain had traditionally been managed with the use of peripheral nerve catheters placed by surgeons. Following feedback from the post-operative ward we decided to evaluate the effectiveness of paravertebral blocks and lidocaine patches in this cohort of patients.

Methods: A retrospective audit was performed to compare post-operative analgesic requirements for children who underwent ear reconstruction surgery at our centre between November 2015 and November 2017. Comparison was made between those who received peripheral nerve catheters (PNC), paravertebral blocks (PVB) or lidocaine patches. The audit was performed with Local Governance permission.

Results: A total of 113 cases were performed; notes were obtained for 12 cases. Five patients received PNC; 2 patients received PVB; and 5 patients received post-operative lidocaine 5% patches. Oral morphine solution was prescribed for breakthrough analgesia post-operatively for all patients. The average dose of oral morphine solution used in the first 48 hours post-operatively was 38.4mg with PNC; 34mg with PVB; and 22.8mg with lidocaine patch. When...
calculated as mg/kg, the average dose was 1.4mg/kg for PNC; 1.05mg/kg for PVB and 0.6mg/kg for lidocaine patch.

Conclusions: Analgesic requirements for children undergoing ear reconstruction surgery were reduced by 57% with lidocaine patches compared with peripheral nerve catheters. Anecdotal evidence that lidocaine patches resulted in reduced postoperative analgesia requirements has been corroborated by the results of this audit. Ongoing data collection will be required to validate these results.

ESRA-0242
E-POSTER VIEWING

CASE REPORTS
SUBARACHNOID BLOCK IN A PATIENT WITH MACHADO-JOSEPH DISEASE
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Background and Aims: Machado-Joseph disease (MJD) or spinocerebellar ataxia 3 is a rare, autosomal, dominantly inherited neurodegenerative disorder characterized by varying degrees of ataxia, ophthalomoplegia, peripheral neuropathy, pyramidal dysfunction and movement disorder. The use of regional techniques in patients with preexisting central nervous system disorders has been controversial, and the patients with MJD are no exception given the concern of worsening the neurological symptoms. In the other hand, an increased risk of pulmonary aspiration is reported in these patients during general anesthesia. Methods: Case report.

Results: A 77-year-old female patient with MJD is proposed for a right hemiarthroplasty due to fracture of the femur. The MJD disease was diagnosed 3 years ago and is manifested mainly by imbalance, lower limb strength and muscle fasciculations. She had also previous medical history of high blood pressure and diabetes mellitus. After informed consent, subarachnoid blockade was performed with 10mg of bupivacaine and 0.04%mg of sufentanil. Surgery proceeded uneventfully. There was full recovery of block by the third postoperative hour.

Conclusions: Considering the risks of general anesthesia in these patients, central neuraxial anesthesia should be an option for patients with MJD presenting for lower extremity operations.

ESRA-0302
E-POSTER VIEWING

CASE REPORTS
TIMING IS UNPREDICTABLE AND THE SEVERITY IS UNCERTAIN: REMOVAL OF EPIDURAL CATHETER AFTER POSTOPERATIVE MYOCARDIAL INFARCTION
Cagiran Z., Serzto N., Karaman S. Ege University School of Medicine, Anesthesiology and Reanimation, Izmir, Turkey.

Background and Aims: Management of perioperative myocardial infarction (MI) becomes more complicated with neuraxial techniques and anticoagulation therapy. We present a case of safe removal of an epidural catheter; 33 hours after oral dual anticoagulant and low molecular weight heparin (LMWH) therapy with a normal coagulation function analysis before removal.

Methods: A 42 year old woman underwent total hip arthroplasty under combined spinal epidural anaesthesia. Her physical examination was normal except inverted T waves in V1-4 on electrocardiogram (ECG). On arrival to postanesthesia care unit ECG revealed bigeminy ventricular extrastyle without 5T segment elevation. After the rising in troponin I, patient transferred to coronary intensive care unit with the diagnosis of non-segment elevation MI. Dual oral antiplatelet therapy and LMWH were started. The removal of epidural catheter required a clinical decision, balancing the risk of epidural hemaoma with continuation of antiplatelet therapy against the risk of thrombosis with discontinuation of the medication. Clopidogrel was immediately discontinued but the patient continued to receive LMWH twice a day with the last dose being 24 hours before the planned epidural catheter removal.

Results: On the second postoperative day all routine coagulation tests, the catheter was removed uneventfully. She was discharged home in the postoperative day 13.

Conclusions: The timing for removal of an epidural catheter in anticoagulated patients is still a very hard decision if further coagulation and aggregation tests
are not available. Considering a reasonable balance of minimizing the risk of epidural hematoma and the risks of thromboembolic events, the catheter removal may be likely be less than 36 hours.

ESRA-0414  
E-POSTER VIEWING  
CASE REPORTS  
AWAKE FIBEROPTIC INTUBATION IN TEMPOROMANDIBULAR JOINT ANKYLOSIS USING AIRWAY BLOCKS- A CASE REPORT  
Dhashmana S.C., King George's Medical University, Anesthesiology, Lucknow, India.  

Methods: A 22-year-old patient with TMJ ankylosis was first nebulised with 3ml of 2% lignocaine for 10 minutes. This was followed by bilateral superior laryngeal nerve block and tracheal block using 2% lignocaine 1ml for every site. Changes in haemodynamics during the airway manipulation were also observed. After achieving airway anaesthesia with the patient lying in the supine position, the fibre optic bronchoscope was checked for illumination and the patient nostril was chosen for intubation, the other nostril was used for oxygen insufflation (1-2 L/min). 7 mm cuffed flexible spiral endotracheal was loaded on the bronchoscope and the well lubricated bronchoscope was introduced through the patient nostril. After orientation and localization of the laryngopharynx, the fibroscope was introduced through the glottic opening entering the epiglottic region, the fibroscope was introduced through the patent nostril. After orientation and localization of the laryngopharynx, the fibroscope was introduced through the glottic opening entering the epiglottic region, the fibroscope was introduced through the patent nostril. After orientation and localization of the laryngopharynx, the fibroscope was introduced through the glottic opening entering the epiglottic region, the fibroscope was introduced through the patent nostril. After orientation and localization of the laryngopharynx, the fibroscope was introduced through the glottic opening entering the epiglottic region, the fibroscope was introduced through the patent nostril.

Results: Patient was successfully intubated using awake fiberoptic technique under airway blocks using awake fiberoptic technique under airway blocks. Airway nerve blocks with topical airway anaesthesia can be successfully used for awake fiberoptic intubation in patients with TMJ ankylosis.

ESRA-0243  
E-POSTER VIEWING  
CASE REPORTS  
ULTRASOUND GUIDED ERECTOR SPINAE PLANE BLOCK FOR INTRAOPERATIVE AND POSTOPERATIVE ANALGESIA FOR PARTIAL HIP ARTHROPLASTY IN A PATIENT WITH CHRONIC HEART FAILURE  
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Methods: A 78-year-old woman, ASA III, with previous known congestive heart failure, arterial hypertension and aortic valve stenosis was scheduled for a partial right hip arthroplasty.

To perform the ESPB the patient was placed in a sitting position and a high frequency linear ultrasound probe was used at the L4 transverse process level which was visualised 4cm laterally from the midline in the parasagittal plane and 25 ml of 0.25% levobupivacaine was infiltrated between the erector spine muscle and the transverse process. The local anesthetic spread in the paravertebral space blocked the dorsal and the ventral rami of the thoracic and abdominal spinal nerves.

After the induction to general anesthesia with a minimal dose of sufentanil, propofol and rocuronium, only sevoflurane maintenance was used.

Results: The surgery was performed without additional opiate analgesia; the patient was hemodynamically stable and emerged without complications. Postoperatively, she did not require any further analgesia. After 12 hours she started experiencing pain requiring NSAILs.

Conclusions: The ESPB could be effective for intraoperative analgesia as for postoperative analgesia. Further studies need to be done to prove the local anesthetic spread and true benefit of the erector spine plane block.

ESRA-0414  
E-POSTER VIEWING  
CASE REPORTS  
UTILIZATION OF THE SERRATUS ANTERIOR PLANE BLOCK IN LOW RESOURCE SETTINGS  
Gedefa E.1, Shimeles R.2, Moll V.2, Addis Ababa University, Anesthesiology, Addis Ababa, Ethiopia, 2Emory University, Anesthesiology, Atlanta, GA, USA.

Methods: A 58-year-old male patient was admitted to the ICU with bilateral rib fractures and thoracostomy tube pain. Pain control was inadequate with a visual analogue scale (VAS) of 9/10 and shallow breathing. We performed bilateral deep SAPBs under ultrasound guidance.

Results: After the SAPB, the VAS improved to 2/10 and the patient was able to breathe deeper. The block was repeated the next day. The patient continued to improve and was eventually discharged home.

Conclusions: Chest trauma, mostly related to RTA, is common in low and middle income countries (LMIC). Associated with this injury is a high mortality and morbidity rate. Analgesia is pertinent to decreasing this complication rate. Resources are scarce in LMIC (narcotics, epidural kits, regional block needles) but most often local anesthetics (LA), spinal needles, IV catheters and even an ultrasound machine can be found. The SAPB is a viable alternative to epidural analgesia or deep plexus blocks to manage rib fracture and/or thoracostomy tube pain. We believe the SAPB can safely be done with a spinal needle or an IV catheter (for repeated boluses of LA) and provides an easily trainable alternative or adjunct to IV/oral analgesia.

ESRA-0474  
E-POSTER VIEWING  
CASE REPORTS  
RADICULAR ARTERY CONTRAST SPREAD DURING NEUROLYTIC SPLANCHNIC NERVE BLOCK  
Gelijkens V., Lebrun C., Vermeylen K., Soetsen E. AZ Turnhout, Department of Anesthesia and Pain Medicine, Turnhout, Belgium.

Methods: A radial artery splanchnic nerve block is indicated for refractory upper gastrointestinal cancer pain. Complications include hypotension, diarrhea and thoracic pain (Şileyman Özalçın et al, Eur J Pain, 2004). One case of transient paraplegia has been described, probably secondary to vasospasm from alcohol spread (Oguz et al, Korean J Pain, 2018). Radicular arteries and the anterior spinal artery supply the lower thoracic, lumbar and sacral spinal cord. Intravascular neurolytic injection or vascular damage could cause long-term neurologic deficits.

Methods: We present a case of contrast spread in the anterior spinal artery during a splanchnic nerve block procedure.

Results: A 71-year-old male presented with chronic postprandial epigastralgia (NRS 9/10) after esophagectomy for adenocarcinoma. Bilateral diagnostic
block with 10 mL of ropivacaine 0.375% using the Abram and Boas’ technique reduced postprandial epigastralgia (NRS 1/10). During the neurolytic procedure under fluoroscopy, real-time contrast injection after left-sided T11 needle placement (20G, 15cm curved blunt needle, Cosman Medical, USA) (figure 1A) showed spread of contrast in a radicular artery and the anterior spinal artery (figure 1B) after which procedure was aborted and repeated uneventfully at the right side using 10 mL ethanol 96%. After the procedure neurological examination was normal. The patient reported good pain relief (NRS 3/10) and was discharged after 72 hours with intact neurological function.

FIGURE 1.

Conclusions: To date, no long-term neurological complications have been reported after splanchnic nerve block. However, this case underlines the importance of evaluation of needle position using real-time contrast injection and fluoroscopy during a splanchnic nerve block procedure.

ESRA0318
E-POSTER VIEWING

CASE REPORTS

AWAKE SHOULDER HEMIARTHROPLASTY WITH ULTRASOUND-GUIDED INTERSCALENE AND SUPRACLAVICULAR NERVE BLOCKADE IN PATIENT WITH SEVERE COPD: A CASE REPORT

Hall A., Hulgar M. Wrightington Hospital, Department of Anaesthesia, Wigan, United Kingdom.

Background and Aims: General anaesthesia in patients with severe respiratory disease is associated with increased morbidity and mortality. Awake surgery under interscalene block may be considered. However, the incidence of phrenic nerve palsy with subsequent reduction in FEV1 and FVC may be prohibitive.

Methods: We present the case report of a 60-year-old gentleman with severe COPD who successfully underwent complex shoulder hemiarthroplasty under interscalene plus supraclavicular nerve blockade. On preoperative assessment the patient gave a history of ongoing smoking with limited exercise tolerance and shortness of breath at rest. Radiological imaging revealed bulous emphysema and spirometry demonstrated significant obstructive disease.

Results: Interscalene and supraclavicular nerve blocks were performed under conscious sedation using an in-plane ultrasound technique. A volume of 15 mL of 2% lidocaine + 0.5% levobupivacaine was infiltrated within the brachial plexus sheath and a further 5 mL 0.5% levobupivacaine at the supraclavicular nerve. There were no immediate complications, surgery was successfully performed with good regional anaesthesia and no oxygen desaturation or breathlessness. The patient was discharged without any complications.

Conclusions: This case demonstrates that advances in regional anaesthesia have made it possible to operate on medically challenging cases, where general anaesthesia is associated with increased morbidity and mortality. Further studies are required to investigate the role supraclavicular nerve plays in breakthrough pain during awake shoulder surgery and the use of supraclavicular nerve blockade to facilitate lower volume interscalene block.

ESRA0268
E-POSTER VIEWING

CASE REPORTS

UTILITY OF INTRATHECAL FLUORESCIN FOR LOCALIZATION OF TEMPORAL BONE CEREBROSPINAL FLUID LEAK


Background and Aims: Intrathecal fluorescein is used for intraoperative localization of cerebrospinal fluid leak (CFL) mainly in endoscopic endonasal surgery. Low doses of intrathecal fluorescein has been reported in the literature as a safe technique. We describe its utility as an adjuvant for localization of CFL in the middle ear.

Methods: A case of 68-year-old man with spontaneous rhinorrhea and magnetic resonance imaging of pneumatic cellus and right petrous bone defect is exposed. Suspecting CFL was scheduled for surgical repair. Previous surgery an intrathecal administration of 1 mL of fluorescein 5% solution was administered slowly for localize the exact site of the leak. Later general anaesthesia was performed.

Results: After 35 minutes from intrathecal injection cerebrospinal fluid dyed with the fluorescein was observed by endonasal endoscopy. The exact origin of the leakage was detected from the posterior fossa through mastoid cells by transmastoid approach. Surgical closure of the leakage was performed with fascia and muscle successfully. The patient recovered without neurological complications in the postoperative period.

Conclusions: Intrathecal fluorescein is a simple and safety technique useful for detection of CFL at different localizations, including the middle ear.
ULNARY BLOCK FOR HAND TRAUMA IN THE E.R
Kamal W. Centre Hospitalier Elyousef, Anesthesia, Halba, Akkar, Lebanon.

Background and Aims: The aim is to provide a good ulnary block in the emergency room for an ambulatory case.

Methods: A 49-year-old man presented with a trauma of his left hand. He had a complex wound on his 5th finger with a moderate neurological defect. The tendon of the digital nerve was partially injured. The man had a full stomach for nearly 3 hours and he refused hospital admission for lack of money. So an ulnary block was performed proximally to the left wrist under ultrasound vision.

Bupivacaine 0.5%-5ml +lidocaine 2%-5ml were given in one syringe. 2 mg of midazolam IV were also given. The surgery went fine without pain or discomfort and the patient was sent home from the emergency.

Results: An ulnary bloc proximally to the wrist with a mixture of bupivacaine 0.5%-5ml and lidocaine 2%-5ml provide a good anesthesia and analgesia for suture of the tendon and the skin. No AINS or analgesic were added. EV A score less than 40.

Conclusions: Peripheral proximal ulnary bloc can be use in the emergency room for suture or moderate trauma.
ESRA-0452
E-POSTER VIEWING

CASE REPORTS

OPEN COLECTOMY UNDER EPIDURAL ANAESTHESIA ONLY: A CASE REPORT

Karpetas G.1, Spyraki M.1, Siampalioti A.1, Skroubis G.2 1University Hospital of Patras, Department of Critical Care and Anesthesia, Patras, Greece. 2University Hospital of Patras, Department of Surgery, Patras, Greece.

Background and Aims: While the elderly population continues to increase, more octogenarians require surgery. Anesthesia management becomes more challenging for the elderly since the prevalence of comorbid diseases is higher. We present a case report of an 84 year old woman, with severe asthma, undergoing left colectomy under single epidural anesthesia. Our aim is to demonstrate the efficacy of epidural anesthesia in patients, on high risk for cardio-pulmonary complications, undergoing abdominal surgery.

Methods: An 84-year-old woman, ASA III, was admitted to our hospital due to almost complete large bowel obstruction. Her clinical history included heart failure, atrial fibrillation, diabetes mellitus and severe asthma under oxygen therapy (FEV1= 53%, PEF= 52%). After locating the thoracic epidural space at level T8-T9 an epidural catheter was introduced. A test dose of 3ml lidocaine 2% was injected, while the anesthesia was maintained with 5ml ropivacaine 0.75% at the beginning following with a 5ml bolus ropivacaine 0.375% 40 minutes later.

Results: The patient underwent open left colectomy with laterolateral anastomosis. The operation lasted 2 hours. During the surgery, the patient remained hemodynamically stable, vasopressors was not used while the anesthesia level was optimal. No pulmonary burden was observed. Additionally, the epidural catheter was used for postoperative analgesia. Postoperative course was uneventful and the patient was discharged 6 days later. No complication was observed for 30 days postoperatively.

Conclusions: Single epidural anesthesia for abdominal surgery remains a challenge for the anesthesiologist. However high risk patients, including octogenarians, benefit from epidural anesthesia for such operations, a fact that contributes to reduced morbidity and mortality.

ESRA-0261
E-POSTER VIEWING

CASE REPORTS

INTERNAL JUGULAR VEIN CANNULATION COMPLICATED WITH SUPRACLAVICULAR HEMATOMA AND ACUTE UPPER BRACHIAL PLEXOPATHY: A CASE REPORT

Mihailovic S. General Hospital Pancevo, Anaesthesia and Intensive Care Medicine, Pancevo, Serbia.

Background and Aims: We report the case of right supravacular hernoma formation with compression of the superior trunk of right brachial plexus (BP) after internal jugular vein (IJV) cannulation, followed by acute and progressive weakness of the right arm.

Methods: A 76-year-old chronic hemodialysis patient was planned for creation of temporary haemodialysis access. During catheterization of right IJV with landmark technique right internal carotid artery was punctured and procedure abandoned. Following day catheter was inserted using ultrasound (US) guidance and patient underwent four hours hemodialysis with unfractionated heparin. Swelling of right suprav MANUAL fossa followed by acute loss of muscular strength in right arm was noted 4 hours later. US examination revealed supravacular hernoma 3 cm in diameter, compressing C5/C6 nerve roots. Consultant surgeon ordered conservative treatment with hematoma compression, Dexamethasone and polyvitamin therapy, and patient was discharged home 28 days later with improved muscular function of right arm.

Results: Although patient was managed successfully with conservative approach, we strongly disagree with surgical decision and believe that course of action should be in direction of surgical exploration and hematoma evacuation. Conservative treatment in the presence of acute progressive nerve lesion is illogical and hazardous, and in this clinical circumstance operative approach should be preferred. Indeed, Chitwood (J. Vasc. Surg. 1996;25:844-9) showed eight-fold better prognosis of nerve recovery if surgical evacuation of compressing hematoma was undertaken within the first four hours, compared with after four hours from nerve injury.

Conclusions: Early surgical exploration should be preferred in comparison to conservative management, if there are evidence of motor BP deficit induced by compressive hematoma.

ESRA-0386
E-POSTER VIEWING

CASE REPORTS

AWAKE UPPER LIMB SURGERY IN A POLYTRAUMA PATIENT WITH MULTIPLE INJURIES

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Background and Aims: The polytrauma patient can present anaesthetic challenges, especially when multiple injuries involve several different surgical teams.

We present a case of a 43-year-old gentleman who was involved in a road traffic collision as a pedestrian. He sustained a variety of injuries including rib fractures and pulmonary contusions, a pneumothorax and extensive facial fractures. He also had contaminated, compound fractures of several digits of his left hand with extensive soft tissue injury. These required urgent operative intervention.

Methods: Due to the patient’s widespread facial injuries there were concerns regarding challenging airway management and the procedure was performed under regional anaesthesia. An axillary brachial plexus block was performed under ultrasound guidance. The intercostobrahial nerve was also anaesthetised. LIDOCaine propofol target-controlled infusion was used for conscious sedation.

Results: The procedure was successfully completed under regional anaesthesia and he underwent operative management of his facial injuries several days later.

Conclusions: On assessment of this patient’s airway, he was thought to represent a potentially difficult intubation. It was also felt that if the patient was intubated, it would not be safe to extubate him at the end of the case. Additionally, his chest injuries made a regional technique highly desirable. An axillary nerve block was chosen to avoid phrenic nerve paralysis. In awake upper limb surgery, it is necessary to block the intercostobrachial nerve for tourniquet tolerance. In conclusion, regional anaesthesia is a feasible, effective and safe option for the polytrauma patient who requires an emergent single limb procedure.

ESRA-0198
E-POSTER VIEWING

CASE REPORTS

A CASE OF ANTERIOR CUTANEOUS NERVE ENTRAPMENT SYNDROME (ACNES) MANAGED BY ULTRASOUND GUIDED PULSED RADIOFREQUENCY

Ono D., Morimatsu H., Kaku R., Matsuaki T. Okayama University Medical School, Department of Anesthesiology and Resuscitology, Okayama, Japan.

Background and Aims: Anterior cutaneous nerve entrapment syndrome (ACNES) is underdiagnosed and undertreated chronic state of pain. This syndrome is characterized by the entrapment of the cutaneous branches of the lower thoracoabdominal intercostal nerves at the lateral border of the rectus abdominis muscle, which causes severe, refractory, and chronic pain.

Methods: Trigger point injection (TPI) of local anesthetic could be used for diagnostic and for therapeutic reason. IF TPI is unsuccessful, a neurolysis may be consider- puled. Pulsed radiofrequency (PRF) is relatively new treatment option for various chronic pain syndromes. Reports for this minimally invasive technique in ACNES are limited.

Results: 25-year-old woman was diagnosed with ACNES. We performed the ultrasound guided TPI. Then we could identify the responsible nerve with ultrasound guided TPI. This was effective with small volume of anesthetic (1% lidocaine 1ml).

Later, we performed PRF at the same site. Although it was possible to obtain pain relief for several days by PRF, there was a flare-up of pain. The pain relief was finally performed by surgical neuroectomy.
Results: In the previous report about PRF to ACNES, they put a needle tip in the rectus abdominis muscle and perform PRF in it. In this case, we tried to increase the therapeutic effect by doing PRF on the responsible nerves with ultrasound guided technique, and, got reasonable effect, but the duration of effect was limited.

Conclusions: We could identify the responsible nerve with ultrasound images, but the effect of PRF was limited. Further research is needed for ultrasound guided PRF in ACNES treatment.

ESRA8-0057
E-POSTER VIEWING

CASE REPORTS

ADVANTAGE OF ULTRASOUND IN SPINAL ANESTHESIA FOR A SUPER-SUPER OBSESE ASIAN PATIENT

Park S.1, Chung C.2, Lee J.2, Lee S.3, Choi S.3, Kim J.4 1Assistant Professor, Anesthesiology and Pain Medicine- Dong-A university College of Medicine, Busan, Republic of Korea, 2Professor, Anesthesiology and Pain Medicine- Dong-A university College of Medicine, Busan, Republic of Korea, 3Associate Professor, Anesthesiology and Pain Medicine- Dong-A university College of Medicine, Busan, Republic of Korea, 4Professor, Anesthesiology and Pain Medicine- Dong-A university College of Medicine, Busan, Republic of Korea.

Background and Aims: A female patient aged 23 years (height 167.2 cm, weight 191.5 kg, body mass index 68.6 kg/m²) was admitted for a repair operation for anterior talofibular ligament rupture caused by a traffic accident, after failure of spinal anesthesia in several other medical centers and the risk of complications of general anesthesia.

Methods: Therefore, ultrasound was used. In the sagittal view of the lumbar spine, with the patient in the sitting position, the border between the sacrum and the lumbar vertebra was confirmed, and in the transverse view, the transverse process, posterior dura, vertebral body, and the distance from the skin to the posterior dura were confirmed.

Results: After skin marking, spinal anesthesia was successfully performed.

Conclusions: Ultrasound can be very useful in spinal anesthesia for a severely obese patient.

ESRA8-0070
E-POSTER VIEWING

CASE REPORTS

COMBINED SCIATIC-FEMORAL NERVE BLOCK FOR HIGH RISK PATIENTS WITH PULMONARY AND CARDIAC DISEASES: CASE REPORT

Sahin A.S.1, Topal M.2, Ay N.1, Acıkgöz A.3, Derbent A.1, Salihoglu Z.1 1Kamuni Sultan Suleyman Education and Training Hospital, Department of Anesthesiology and Reanimation, Istanbul, Turkey, 2Isparta State Hospital, Department of Anesthesiology and Reanimation, Isparta, Turkey, 3Hannover Nordrast Krankenhaus, Department of Anesthesiology and Reanimation, Hannover, Germany.

Background and Aims: Patients with high pulmonary and cardiac risk presenting for non-cardiac surgery are considered to have increased preoperative, perioperative and postoperative complications. Peripheral nerve blocks are associated with minimal hemodynamic changes and ideal method for high-risk surgical patients. In this case report, we present combined sciatic-femoral nerve-block for lower extremity surgery in patient with high pulmonary and cardiac risk.

Methods: A 72-year-old male patient, presented for arthroscopy, with complaints of pain and swelling in the left knee. He had stage 4 chronic obstructive pulmonary disease. Symptoms of patients were cough, dyspnea, and chest wheezing. High degree of aortic regurgitation was detected on echocardiography. In operating room, patient was admitted to the supine position with femoral nerve block; under sterile conditions, 5ml 0.5% bupivacaine+5ml 2% lidocaine +25mg fentanyl. The nerve stimulator was used in conjunction with block needle (Stimuplex®,20 G,100 mm). 10 mL0.5% bupivacaine+5mL2%lidocaine +25mg fentanyl mixture was prepared for the sciatic nerve block before lateral approach. In the sciatic nerve block, medication was performed after observed plantar flexion at 0.5mA, followed by contraction of the patella and quadriceps in the femoral nerve block. Adequate motor block (trombone 2) formation and sensory level reached T12level, was allowed surgical intervention.

Results: During surgery patient had no pain and hemodynamic changes. No postoperative complications were observed and the patient was discharged post-operatively on the second day.

Conclusions: In conclusion, combined sciatic-femoral nerve block can be used successfully in patients with high pulmonary and cardiac risk. Sciatic-femoral nerve blocks provided faster bladder function recovery and faster discharging from hospital and are associated with significantly lower pain scores during the first 6 postoperative hours.

ESRA8-0458
E-POSTER VIEWING

CASE REPORTS

ANESTHETIC APPROACH OF A MORBIDLY OBSESE PATIENT UNDERGOING SINGLE- STAGE BILATERAL THORACIC SURGERY.

Siampalioti A. University Regional General Hospital of Patras, Anaesthesiology and ICU, Patras, Greece.

Background and Aims: The anesthetic management of morbidly obese patients constitutes a challenge for the anesthesiologist, as they demonstrate significantly high morbidity and mortality rates. We present a case of morbidly obese patient undergoing bilateral thoracotomy under combined general and epidural anesthesia.

Methods: A 44-year-old male with (BMI=49kg/m²) and a medical history of arterial hypertension, diabetes mellitus, dyslipidemia and nephrectomy (kidney cancer), underwent a bilateral thoracic surgery. Spirometry revealed: FEV1=1,98 k (96%) and FVC=1,32l (88%) and arterial blood gases (ABG’s) in room air were pH 7.39, pCO2=36.7mmHg, pO2=72.5mmHg. Echocardiography revealed hypostic stenosis and EF=40%. We administered general anesthesia with a double lumen endotracheal tube 39Fr, along with thoracic epidural analgesia (levobupivacaine 2% and fentanyl 2µg/ml, 5ml/h and bolus 5ml every 15 min) at the T5a, interspace . Basic monitoring, Bispectral Index and Cerebral Oximetry monitor (INVOS) were used.

Results: The patient was hemodynamically stable perioperatively, while no difficulty was observed during one- lung ventilation, for both lungs. Cerebral oximetry and BIS remained within normal limits (INVOS variation<10%, BIS 40-55). Postoperative ABG’s were FiO2= 35%, pH=7.4, pO2=125mmHg, pCO2=38,2mmHg and VAS scores <5 under epidural analgesia.

Conclusions: Thoracic epidural analgesia has been proven to be beneficial and safe for the morbidly obese patients, providing not only quality and faster recovery (Alodore score <9 within 45 min), but also a reduction in ICU stay following high risk surgeries.

ESRA8-0490
E-POSTER VIEWING

CASE REPORTS

COMBINED SPINAL AND EPIDURAL ANESTHESIA IN ANTICIPATED DIFFICULT AIRWAY DUE TO LARYNGEAL CANCER: A CASE REPORT

Siampalioti A. University Regional General Hospital of Patras, Anaesthesiology and ICU, Patras, Greece.

Background and Aims: Difficult airway management constitutes the most challenging issue for anesthesiologists. Regional anesthesia remains the alternative option in case of an anticipated difficult airway. We report the case of a woman with difficult airway due to known laryngeal stenosis undergoing abdominal hysterectomy. Our aim is to demonstrate the safety and efficacy of regional anesthesia in such cases.

Methods: A 52-year-old woman with known difficult airway was admitted for total abdominal hysterectomy. Her medical history revealed a significant laryngeal stenosis as a result of removal of a granular cell myoblastoma by CO2 laser. The ENT surgeon suggested the use of an endotracheal tube size 5, in case of
general anesthesia, to avoid further damage to the larynx. Basic monitoring and Venturi mask (35%) were used.
We administered 2mg of midazolam to manage anxiety. A spinal block was administered at 3–4 (ropivacaine 15mg+fentanyl 10μg) and an epidural block at T10-11. The epidural catheter was used only for postoperative analgesia (ropivacaine 0.2%/fentanyl 2μg/ml).

**Results:** The anesthesia level was optimal intraoperatively and the patient remained hemodynamically stable. The postoperative VAS scores were ≈4.

**Conclusions:** Combined spinal and epidural anesthesia remain safe and efficacious alternative to general anesthesia in patients with difficult airway. The perioperative outcomes are excellent including better analgesia scores, fewer complications and therefore reduced length of hospital stay.

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**ESRA-0300**

**E-POTER VIEWING**

**CASE REPORTS**

**INGUINAL HERNIA REPAIR WITH Ilioinguinal Nerve Block in Day Case Setting; Is There Enough Evidence to Stop This Practice?**

**Siddiqui Z,1, Raff1. 2**

1Our Lady of Lourdes Hospital, Registrar in Anaesthesia and Intensive Care, Drogheda, Ireland, 2Our Lady of Lourdes Hospital, Consultant in Anaesthesia and Intensive Care, Drogheda, Ireland.

**Background and Aims:** Ilioinguinal nerve block has been used extensively for inguinal hernia repair. Inadvertent transient femoral nerve block is a known complication after ilioinguinal nerve block. [1,2].

**Methods:** We present a case of transient femoral nerve palsy in a 17-year-old ASA 1 male scheduled for inguinal hernia repair. He received standard general anesthesia and ilioinguinal nerve block with landmark technique using 20 mL of 0.25% levobupivacaine.

**Results:** Postoperatively, he developed weakness in the femoral nerve distribution. The patient was admitted overnight and block was assessed at regular intervals which resolved after 36 hours. The patient was discharged afterwards with no further sequelae.

**Conclusions:** This complication has been repeatedly reported in many case reports and trials. Is it time to call for this block to not be done in any day case setting?

**References:**


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**ESRA-0411**

**E-POTER VIEWING**

**CASE REPORTS**

**NON TRAUMATIC CARDIAC TAMPOHANDE IN THE PERIOPERATIVE**

**Urias E,1, Ortega J. 2**

1Anesthesiology, Culiacan, Mexico, 2Hospital General de Culiacan, Critical Care, Culiacan, Mexico.

**Background and Aims:** Monitoring in the transanesthetic setting should be part of the anesthesiologists’ efforts on every surgery. And in some of them can make crucial decisions for the patients.

**Methods:** A female patient, 84 years old, with a history of colon cancer, post operated of intestinal occlusion, starts with abdominal pain, malnutrition. After 10 days in critical care, a decision is made to proceed with surgery because of the occlusion abdominal diagnostic. Patient weight was of 41kg, albumin 1.4, hb 10, platelets 120000 leucocytes 10000 Electrocardiogram with sinus tachycardia, 100x, systemic pressure 110/60mmHg. Torax radiograph showing a pattern of enfiema. She entered the operating room for correction of the occlusion and to put a central vein. Anesthesia is performed epidural showing an important decreasing in her vital signs after it (BP 80/40, 110bpm, SpO2 92%). It is decided to perform a cardiac and pulmonary ultrasound showing immediately that the patient had a non-traumatic tamponade that was compromising her heart. The cardiology team was called and they performed the pericardiocentesis, leaving the catheter in place so they could continue draining the tamponade. The patient went to critical care and continued with an evolution favorable.

**Results:** Tamponade was because of the severe desnutritions of the patient all of the physiological solution who was used over the procedure went to the cardiac space making the tamponade. Ultrasound was crucial because otherwise we will have continued administering liquid and vasopressors and the patient would probably had died.

**Conclusions:** The use of ultrasound as a monitor should be mandatory for the residents.
obvious trigger point in the posterior surface of the left hemi-thorax, at the 6th thoracic level.

After explaining the procedure to the patient and having obtained informed consent, we performed US-guided intercostal nerve block at the location of the trigger point at the 6th thoracic level (1 ml ropivacaine 2%/8 mg dexamethasone).

Results: No adverse effect was reported after our intervention. The patient is on a weekly phone follow-up for already 20 days reporting reduced pain scores and duration, improving patient’s respiration and quality of life.

Conclusions: Our case provides evidence confirming the efficacy and safety of intercostal nerve block for treating chronic chest wall pain. US-guidance should be preferred as intercostal nerve injections are more accurate when compared to landmark technique.

ESRA-0894
E-POSTER VIEWING

CASE REPORTS

SICK SINUS SYNDROME UNMASKED BY SPINAL ANESTHESIA FOR HIP SURGERY

Wong T., Venkatesan K. Khoo Teck Puat Hospital, Anesthesia, Singapore, Singapore.

Background and Aims: Central neuroaxial anesthesia is commonly performed for hip fracture fixation surgeries. Regional anesthesia decreases the risk of respiratory complications and postoperative delirium/dementia in this predominantly elderly population with multiple comorbidities. However, spinal anesthesia may result in the manifestation of sick sinus syndrome, which occurs mainly in older adults.

We discuss a patient with undeclared sick sinus syndrome who presented after spinal anesthesia.

Methods: Case report.

Results: An 89-year-old gentleman with a past medical history of dementia, hypertension, hyperlipidemia and hearing impairment was planned for right intertrochanteric fracture fixation. An uncomplicated spinal anesthesia was performed for hip fracture fixation surgeries. Regional anesthesia decreases the risk of respiratory complications and postoperative delirium/dementia in this predominantly elderly population with multiple comorbidities. However, spinal anesthesia may result in the manifestation of sick sinus syndrome, which occurs mainly in older adults.

We discuss a patient with undeclared sick sinus syndrome who presented after spinal anesthesia.

Conclusions: Sick sinus syndrome (SSS) comprises a variety of conditions involving sinus node dysfunction, resulting in the inability to generate a physiologically appropriate heart rate. The sudden sympathetic block with spinal anesthesia gives little time for cardiovascular compensation, especially in patients with SSS who have low physiologic reserve. Block height determines the extent of sympathetic blockade, which may vary between two to six dermatomes above the sensory level and incompletely below this level. Although lower limb surgery under regional anesthesia may benefit a large population of elderly patients, central neuroaxial blockade should be avoided if any suspicion of SSS is present.
Calculation of maximum safe dose of each LA when a mixture of two LA are used
- Location of 20% lipid emulsion
- Treatment dose of 20% lipid emulsion as per AAGBI guidelines

**Results:** Total of 34 anaesthetists participated in the survey (consultants-14, senior trainee-11, junior trainee-9). 58% of the group were correct in answering the full guideline is as follows:

**Table 1:** Multivariable analysis with respect to overall survival in patients after HIPEC operation

<table>
<thead>
<tr>
<th>Variable</th>
<th>Univariable odds ratio</th>
<th>95% CI</th>
<th>P-Value</th>
<th>Multivariable odds ratio</th>
<th>95% CI</th>
<th>P-Value</th>
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<tr>
<td>Postoperative MCT</td>
<td>0.896 (0.504-1.585)</td>
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<td>Postoperative allsoms</td>
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<td>Postoperative Total protein</td>
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<tr>
<td>Postoperative transfusion</td>
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<td>Postoperative APIT with</td>
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</table>

**Methods:** We prospectively observed thirty-eight cases with abdominal malignancy underwent CRS with HIPEC, (2012-2015). Serial arterial blood gas sampling for electrolytes, blood sugar, coagulation control and maintenance of normovolemia.

**Results:** Majority of patients were female 23 (60.5%) and ASA III, 23 (60.5%). Changes in haemodynamics, temperature, glucose, and lactate (Fig.1A-B). Our patients had overall postoperative mortality 42.1%, (Fig.2). Univariate analysis of varibles that can affect outcome after HIPEC demonstrated that low haemoglobin, haematocrit, tumour marker (CA19.9), low potassium, calcium, albumin, higher intra operative colloid transfusion, postoperative activated partial thromboplastin time, bacterial and fungal infections were potentially risk factors affected patient’s mortality. Multivariable analysis of those factors showed that lower preoperative calcium (hazard ratio [HR] = 0.116; 95% confidence interval [CI] = 0.033-0.407; P = 0.001), higher plasma transfusion (HR = 1.004; 95% CI = 1.001-1.003; P = 0.012) and higher postoperative bacterial infections (HR = 5.987; 95% CI = 1.009 - 35.54; P = 0.014) were independent predictors of patient death, (Table 1).

**Conclusion:** Our aim is to analyze anaesthetic management of HIPEC patients and investigate its impact on patient’s outcome. **Methods:** We prospectively observed thirty-eight cases with abdominal malignancy underwent CRS with HIPEC, (2012-2015). Serial arterial blood gas sampling for electrolytes, blood sugar, coagulation control and maintenance of normovolemia.

**Results:** Majority of patients were female 23 (60.5%) and ASA III, 23 (60.5%). Changes in haemodynamics, temperature, glucose, and lactate (Fig.1A-B). Our patients had overall postoperative mortality 42.1%, (Fig.2). Univariate analysis of varibles that can affect outcome after HIPEC demonstrated that low haemoglobin, haematocrit, tumour marker (CA19.9), low potassium, calcium, albumin, higher intra operative colloid transfusion, postoperative activated partial thromboplastin time, bacterial and fungal infections were potentially risk factors affected patient’s mortality. Multivariable analysis of those factors showed that lower preoperative calcium (hazard ratio [HR] = 0.116; 95% confidence interval [CI] = 0.033-0.407; P = 0.001), higher plasma transfusion (HR = 1.004; 95% CI = 1.001-1.003; P = 0.012) and higher postoperative bacterial infections (HR = 5.987; 95% CI = 1.009 - 35.54; P = 0.014) were independent predictors of patient death, (Table 1).

**Conclusion:** Our guideline is novel and based on latest evidences on this subject. We propose that the above guidance can improve the quality of care in patients at risk of ALCS by promoting multidisciplinary discussion at Team briefings (WHO checklist), use of safe anaesthetic techniques and better monitoring of high risk patients using a specific observation chart.
Conclusions: Lower preoperative calcium, higher intraoperative plasma protein transfusion and postoperative bacterial infection were independent predictors of patient death. Perfect perioperative management of temperature, acid-base balance together with maintenance of normovolemic status are crucial in HIPEC procedure.

ESRA8-0289
E-POSTER VIEWING
MUSCULOSKELETAL PAIN AMONG PAIN PRACTITIONERS
Gupta R,1 Baloch M,1 Maguire R1 Frimley Park Hospital, Anaesthesia and Pain Management, Camberley, United Kingdom, 2Belfast City Hospital, Anaesthesia and Pain Management, Belfast, Ireland.

Background and Aims: Pain physicians are subject to many and varied occupational risks especially with prolonged standing, usage of fluoroscopy and wearing lead gowns. Wearing of heavy lead gowns can contribute to back pain in physicians. The study was an attempt to find the incidence of back pain in pain physicians practising in London.

Methods: A questionnaire was created on monkey survey portal and sent to all the anaesthetic departments in London providing pain service. The questions asked were related to their current practice of pain management, years of practice, intervention sessions per week, personal protective equipment used, incidence of axial pain, loss of work days. The answers received were online and anonymous.

Results: A total of 54 responses were received. Most responses were from consultant grade (n=48). Most were practicing pain interventions for last five years (n=21) with most doing 1–2 fluoroscopic sessions per week (n=19). Most physicians (n=36) were using one piece lead apron for protection and the most common usage of axial pain, loss of work days. The answers received were online and anonymous.

Conclusion: This survey highlights the problem of musculoskeletal pain among pain physicians. Our recommendation is to provide more attention in the usage of lead gowns which are more comfortable to handle with input from occupational health. The results and recommendations were similarly observed by Soueid A et al (2010).

ESRA8-0293
E-POSTER VIEWING
A QUIET DAY IN THE BLOCK ROOM: PLASTICIZED WASTE AND REGIONAL ANAESTHESIA
Lorigan D, Mahon P. Cork University Hospital, Anaesthesia, Cork, Ireland.

Background and Aims: Anaesthetists produce recyclable and non-recyclable plastic waste through inherent procedural necessities and drug preparation. It is estimated that operating rooms generate 25–30% of hospital waste. We believe that the quantity of this waste is increasing annually in our institution. Our institution has a dedicated block room supporting two orthopaedic theatres seven days a week.

Our aim was to quantify the amount and type of waste generated.

Methods: We identified a day in our block room that reflects the practice in our institution. We collected all waste, excluding sharps, generated by the provision of regional anaesthesia over the course of the day. At the end of the day we separated all the waste into the below categories. We weighed and photographed each category and added the results together to obtain the total weight for the day.

Results: Five patients underwent regional anaesthesia. Procedures included one Axillary Brachial plexus block, three Spinal and Femoral nerve blocks, and one interscalene block. The total weight of waste produced was 3,087.85g. Hard Plastic weighed 2,798g. Soft Plastic weighed 614.5g. Plastic Packaging weighed 274.9g. Paper Packaging weighed 384.1g. Latex and nitrile gloves weighed 400.4g. Textiles weighed 554.45g. Tissue Paper weighed 178.2g. Cotton weighed 45.5g. Miscellaneous weighed 74.7g.

Conclusions: Typically our block rooms would perform regional techniques on 7 to 8 patients per day. This substantial amount of waste therefore reflects a relatively quiet day in our institution.

ESRA8-0334
E-POSTER VIEWING
INTERMEDIATE ULTRASOUND GUIDED REGIONAL ANAESTHESIA TRAINING – RECOGNISING A GAP IN THE MARKET
O’Donoghue J, Lowe G., Raj D. Queen Elizabeth University Hospital, Anaesthetics, Glasgow, United Kingdom.

Background and Aims: Since their first publication in the mid-1990s, ultrasound-guided regional anaesthesia techniques have gained increased popularity and are integral to the Royal College of Anaesthetists [RCOA] training curriculum. Education and training are essential to develop these skills. As limited study budgets are available, those who do not want to subspecialise in regional anaesthesia may be reluctant to spend a large proportion of their budget.

Methods: We developed a course that was beyond the scope of basic workshops and would appeal to intermediate level trainees as either a stepping stone to an advanced workshop or as a cost-effective alternative for trainees who sought to develop their skills further. The course program was mapped to the RCOA curriculum and matrix.

Results: This course was approved for 5 external RCOA continuing professional development points. The cost was £125 and the course was over-subscribed. The feedback suggested that the course was a great success. All 15 attendees thought that the pre-course material was helpful and appropriate, the practical stations were useful and well delivered, and that they would recommend the course to a colleague. All the candidates, except one (who answered neutral) felt more confident about performing the regional blocks which they had studied.

Conclusions: Universal agreement on the most effective way to teach ultrasound guided regional anaesthesia has still not been reached. However, we believe that there is a need for a cost effective intermediate level workshop for anaesthetic trainees. We have demonstrated that with the right planning, dedicated experienced faculty, this can be delivered efficaciously.

ESRA8-0373
E-POSTER VIEWING
IMPLEMENTATION OF A NOVEL CONTINUOUS SCORING SYSTEM FOR BLUNT CHEST TRAUMA PATIENTS TO MONITOR EFFECTIVENESS OF ANALGESIA INTERVENTIONS AND IMPROVE OUTCOMES IN A UK MTC
Qureshi A., Beckett E. Royal Victoria Infirmary, Anaesthesia, Newcastle upon Tyne, United Kingdom.

Background and Aims: The Royal Victoria Infirmary is a UK level one trauma centre receiving severe blunt chest trauma patients. The overall mortality in rib fractured patients is approximately 10%, and 13% of these experience complications, primarily respiratory. Regional anaesthetic techniques (paravertebral catheters) are offered to rib fracture patients at our centre. We set out to implement a system to allow us to a) prioritise these pain referrals b) monitor effectiveness of physiotherapy/ analgesic interventions and c) improve overall outcomes of this patient group.

In March 2018 we implemented a modified version of a continuous scoring system for chest trauma (PIC Scoring) originally developed by WellSpan York Hospital, York, Pennsylvania, USA (a Level One Trauma Center).

Methods: Patients underwent PIC scoring four times daily. This involved recording of:

1. dynamic chest pain score (0-10)
2. inspiratory capacity, assessed against patient specific volumes for ALERT and GOAL
3. cough strength

Conclusions: Typically our block rooms would perform regional techniques on 7 to 8 patients per day. This substantial amount of waste therefore reflects a relatively quiet day in our institution.
A combined score of 5 or less prompted the nursing team to discuss the patient with a physician to review and arrange for any necessary intervention. Scores were used by pain nurses to assess requirement for regional technique.

TABLE 1.

<table>
<thead>
<tr>
<th>Score</th>
<th>Deep Insp Pain</th>
<th>Inspiratory Capacity</th>
<th>Cough</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 point</td>
<td>Severe (8-10)</td>
<td>Unable to perform</td>
<td>Absent</td>
</tr>
<tr>
<td>2 points</td>
<td>Moderate (5-7)</td>
<td>Below alert</td>
<td>Weak</td>
</tr>
<tr>
<td>3 points</td>
<td>Mild (0-4)</td>
<td>Between alert and goal</td>
<td>Strong</td>
</tr>
<tr>
<td>4 points</td>
<td></td>
<td></td>
<td>Above goal</td>
</tr>
</tbody>
</table>

TABLE 2.

Results: Published USA data demonstrated reduced length of stay, unplanned ICU admissions, pneumonia rates and mortality. PIC scoring is being audited and data from the Trauma Audit Research Network is being collated. Current patient outcomes will be compared to patients prior to implementation to evaluate any change in these outcomes.

Conclusions: We anticipate by September 2018 we will be able to demonstrate improvements in aforementioned outcomes as well as respiratory function in those receiving regional anaesthetic techniques.

ESRA-0423
E-POSTER VIEWING

MISCELLANEOUS

COMPARATIVE EVALUATION OF ONSD IN PATIENTS UNDERGOING LAPAROSCOPIC CHOLECYSTECTOMY USING LOW AND STANDARD PRESSURES OF GAS INSUFFLATIONS

Saini V, Samra T. Postgraduate Institute of Anaesthesia and Medical Research, Anesthesia, Chandigarh, India.

Background and Aims: Measurement of optic nerve sheath diameter (ONSD) using ultrasound is an accurate and non-invasive bedside tool for the detection of raised intracranial pressure (>20 mmHg). Pneumoperitoneum increases intracranial pressure (ICP) in animal models. However till date no study has compared the effect of low pressure and standard pressure pneumoperitoneum on ICP.

To compare the effect of low vs standard pressure pneumoperitoneum on ICP using ocular USG to measure ONSD 20 minutes after CO2 pneumoperitoneum with 30 degree reverse Trendelburg position.

Methods: Prospective observational study conducted from March 2015-December 2017 and registered in Clinical Trials Registry – India (identifier, CTRI/2014/10005124). 200 patients were randomised into two equal groups using sealed envelope method.

Group S: Pneumoperitoneum using standard (12-16 mm Hg) pressures
Group L: Pneumoperitoneum using low pressures (8-10 mm Hg).

Trend: After returning to supine position without CO2 pneumoperitoneum.

Results: Results are summarized in Table 1.

Conclusions: In our study we did not find any difference in ONSD which is a marker of ICP in the groups with low or standard IAP maintained during procedure.

ESRA-0455
E-POSTER VIEWING

MISCELLANEOUS

HOW MUCH DOES THE USE OF AUDIO-VISUAL DISTRACTION IMPROVE PATIENT EXPERIENCE IN A WAKE SURGERY OVER STANDARD CARE?

Sinha R, Fletcher T, Hewson D, Bedforth N. Nottingham University Hospitals NHS Trust, Anesthesia, Nottingham, United Kingdom.

Background and Aims: The use of audio-visual distraction therapy in awake surgery is well documented. Our department appropriated a tablet device to help improve our service. We wished to evaluate the quality of our service and patient satisfaction at baseline and compare it with that seen after introduction of the audio-visual distraction method.

Methods: Prior to introduction of the device, we administered a validated questionnaire pre- and postoperatively enquiring about the patients’ anxiety and their desire to be aware. Patients were offered sedation during placement of the block and this was repeated at their request intra-operatively if required.

Following introduction of the device, the above questionnaires were re-administered. These patients were offered sedation at the outset and this was administered if they so desired.

Results: Over 90% of patients surveyed admitted to being worried about both the anaesthetic and the surgery. Most wanted to understand the process but did not want to know what was happening. Over 90% were tense or upset or worried. Analysis of the postoperative questionnaire demonstrated reversal of these trends in 90% of respondents. In the group exposed to the tablet device, postoperative questionnaire revealed that about 90% of those surveyed felt their anxiety allayed while all responders reported being very satisfied with the service across both groups.

Conclusions: Satisfaction with the service provided and anxiety alleviation was high across both groups. While the role of AV aids is well documented, the difference made by a friendly face and ‘small talk’ cannot be underestimated.

ESRA-0460
E-POSTER VIEWING

MISCELLANEOUS

DO WE SING FROM THE SAME HYMN SHEET? PERI-OPERATIVE MANAGEMENT OF HIP FRACTURES - A SURVEY

Sinha R, Fletcher T, Bedforth N. Nottingham University Hospitals NHS Trust, Anesthesia, Nottingham, United Kingdom.

Background and Aims: Hip fracture management forms the bread and butter of trauma unit. The affected patient group is often elderly with multiple co-morbidities and therefore at high risk of perioperative morbidity and mortality. We set about surveying trauma anaesthetists at a busy major trauma centre with Hip fractures - A survey to enquire whether there was a uniformity of approach.

Methods: A survey was developed outlining the three types of patient frequently seen on our operating lists, i.e., the middle-aged patient with an unexpected significant injury, the slightly older patient with comorbidities and the elderly and often frail patient with several serious comorbidities. Data was collected about the preferred anaesthetic technique and postoperative analgesic options of each of these ‘different’ patients.

<table>
<thead>
<tr>
<th>ONSD VARIATION (TRIAL)</th>
<th>ONSD (ONSET)</th>
<th>ONSD (15min)</th>
<th>ONSD (30min)</th>
<th>ONSD (60min)</th>
<th>ONSD (120min)</th>
<th>P VALUE</th>
<th>P VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>L0</td>
<td>3.5±0.6</td>
<td>3.5±0.6</td>
<td>3.5±0.6</td>
<td>3.5±0.6</td>
<td>3.5±0.6</td>
<td>0.954</td>
<td>0.954</td>
</tr>
<tr>
<td>L1</td>
<td>3.5±0.5</td>
<td>3.5±0.5</td>
<td>3.5±0.5</td>
<td>3.5±0.5</td>
<td>3.5±0.5</td>
<td>0.503</td>
<td>0.503</td>
</tr>
<tr>
<td>L2</td>
<td>4.1±0.6</td>
<td>4.1±0.6</td>
<td>4.1±0.6</td>
<td>4.1±0.6</td>
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<td>0.856</td>
</tr>
<tr>
<td>L3</td>
<td>4.1±0.5</td>
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<td>0.723</td>
<td>0.723</td>
</tr>
</tbody>
</table>

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ESRA8-0255
E-POSTER VIEWING
MISCELLANEOUS

SURVEY OF ANAESTHETIC TECHNIQUES FOR KNEE ARTHROPLASTY: AT BRITISH SOCIETY OF ORTHOPAEDIC ANAESTHETISTS (BSOA) ANNUAL MEETING NOVEMBER 2017
Smith B.1, Williams O.2, Hutton R.2, McFarlane-Majed L.2, DaSilva E.1,2
Anaesthetic Specialty Registrar, Royal Orthopaedic Hospital, Birmingham, United Kingdom, 1Medical Student, University of Birmingham Medical School, Birmingham, United Kingdom, 2Anaesthetic Consultant, Royal Orthopaedic Hospital, Birmingham, United Kingdom.

Background and Aims: Total knee arthroplasty is a common and painful orthopaedic procedure. Anaesthetic techniques have evolved with enhanced recovery programmes to improve postoperative pain control, aid in earlier mobilisation and reduce length of stay. Consensus in the literature regarding optimal anaesthetic technique is limited. Therefore, we decided to survey a group of anaesthetists with a specialist interest in orthopaedic anaesthesia on preferred anaesthetic techniques, looking for consistency.

Methods: Questionnaires were handed out to delegates at the BSOA Annual Scientific meeting, Prague. Data collected included country of anaesthetic practices (15 vs 3). Spinal anaesthesia was performed slightly more often with isobaric than hyperbaric bupivacaine (56% vs 36%) and with opioid more than isobaric than hyperbaric bupivacaine (56% vs 36%) and with opioid more than without (66% vs 33%).

Conclusions: This survey mirrors current literature, that no single anaesthetic technique is preferred to any other. For spinal anaesthesia there was marked variation in the choice of drug and additives used. Adductor canal blocks appear to be used more often than femoral nerve blocks, probably related to recent literature showing similar analgesia with less quadriceps spasticity and earlier mobilisation. Whilst there is no perceived harm, is there mileage in the trickle-down effect of national guidelines outlining management of specific patients; this is likely down to interpretation of information provided and represents the viewpoint that there is often more than one ‘correct answer’.

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ESRA8-0477
E-POSTER VIEWING
MISCELLANEOUS

AN EVALUATION OF ANAESTHETIC TECHNIQUES FOR PRIMARY LOWER LIMB JOINT ARTHROPLASTY (TOTAL HIP REPLACEMENT (THR) AND TOTAL KNEE REPLACEMENT (TKR)) AT A TERTIARY ORTHOPAEDIC HOSPITAL
Smith B.1, Shellard R.2
Anaesthetic Specialty Registrar, Royal Orthopaedic Hospital, Birmingham, United Kingdom, 1Consultant Anaesthetist, Royal Orthopaedic Hospital, Birmingham, United Kingdom.

Background and Aims: At our centre there is no formal enhanced recovery protocol for lower limb arthroplasty and so we set out to evaluate our current practice looking for positive and negative themes that can be incorporated into future plans.

Methods: Over a two week period we collected data on consecutive primary hip and knee arthroplasties. This included anaesthetic technique, mobilisation (along with reasons for failure to mobilise) and anaesthetic related complications. We also evaluated patient satisfaction.

Results: Fifty-nine joint replacements were completed, including 25 knee and 34 hip arthroplasties.

In the THR group all of the patients had a general anaesthetic followed by low dose spinal anaesthesia using isobaric bupivacaine (mean 1.6ml, range 1.0-1.8ml) and diamorphine. In the TKR group 80% (20/25) had general anaesthetic of which 10 had spinal anaesthesia and 10 had lower limb blocks.

60% of the patients mobilised as expected with physiotherapy on first review (71% THR, 40% TKR). The main reasons for not mobilising were dizziness (28%) and reduced lower limb sensation or weakness (32%). 16% of the GA+block group mobilised on first review. Catheterisation for urinary retention in the first 24 hours was the most common complication occurring in 39% of patients following spinal anaesthesia.

96% of patients were satisfied with the perioperative management and 96% would be happy to have the same anaesthetic technique again.

Conclusions: Overall patients were satisfied with the anaesthetic and perioperative management that they received at our centre. THR management is very consistent however there is potential to review variation in TKR management.

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ESRA8-0150
E-POSTER VIEWING
MISCELLANEOUS

REGIONAL ANAESTHESIA CLUB – EXPERIENCE OF SETTING UP REGULAR, ALL LEVELS, TEACHING SESSIONS IN OUR DEPARTMENT
Topor B., Miliner Q. Royal Devon and Exeter NHS Foundation Trust, Department of Anaesthesia, Exeter, United Kingdom.

Background and Aims: Ultrasound guided regional anaesthesia (RA) is a part of routine anaesthetic practice, while competence in performing particular blocks depends on previous clinical exposure and training.

To facilitate learning and maintenance of safe and up-to-date RA skills, we have designed and established RA club sessions.

Methods: We have conducted a survey among Consultants and Trainees to see how comfortable they were with RA blocks, how they would like to learn Ultrasound guided techniques and which blocks would be useful to learn.

To facilitate up-to-date teaching, the first author, as a RA fellow, attended an EDRA approved course, in addition to routine training. Local consultants with expertise in performing particular blocks were invited to each session.

Four sessions were arranged with focused anatomy, sonoanatomy and safety points review, closely followed by hands-on, scanning practice. Ultrasound scanners were supplied from the clinical area, as sessions took place after work, and colleagues volunteered as models.

Results: The feedback on sessions, almost universally, shows that they were considered useful and personal learning objectives were achieved. Areas of particular interest were identified as well, to aid future sessions planning.

Conclusions: This high quality but low cost intervention may facilitate learning and maintenance of RA skills within the department and can be repeated. Likely positive effects are: promotion of patient safety, list efficiency and greater flexibility in list cover.

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ESRA8-0391
E-POSTER VIEWING
MISCELLANEOUS

THE COMPARISON OF HEMODYNAMICS VARIABLES USING FLOTRAc (SENSOR) IN THE ENDOVASCULAR REPAIR OF ABDOMINAL (EVAR) AND THORACIC AORTIC ANEURYSM (TEVAR) USING DIFFERENT ANAESTHETIC TECHNIQUES
Tskilolit S.1, Pourizitaki C.2, Chasapidis V.1, Douma P.1, Doumparasati M.1, Tsousi G.1,2
1General Hospital Papageorgiou, Anaesthesiology, Thessaloniki, Greece, 2School of Health Sciences Aristotel University of Thessaloniki, ICU AHEPA University Hospital Faculty of Medicine, Thessaloniki, Greece, 1School of Health Sciences Aristotel University of Thessaloniki, ICU AHEPA University Hospital Faculty of Medicine, Thessaloniki, Greece.

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of Health Sciences Aristotle University of Thessaloniki, ICU AHEP A University Hospital Faculty of Medicine, Thessaloniki, Greece.

**Background and Aims:** EVAR and TEVAR is being evaluated as an alternative therapeutic access to open aneurysm repair.

In this study we estimated hemodynamic parameters, like as cardiac output (CO), stroke volume (SV), and stroke volume variation (SVV) using FloTrac and compare these variables between spinal anaesthesia (EVAR) and general anaesthesia (TEVAR).

**Methods:** Thirty eight (EVAR) and thirty five patients (TEVAR) were enrolled.

Intraoperative monitoring included pulse oximetry, electrocardiogram with ST-segment analysis and FloTrac (sensor) using Vigileo monitor (by Edwards LifeSciences) in combination with invasive radial arterial pressure.

We recorded values of CO, SV, SVV, through the Vigileo device, at the following times:

(i) 5 min after application of spinal anesthesia or induction in general anesthesia,

(ii) 3 min before the expansion of endograft,

(iii) 1 min after the deployment of central graft and

(iv) 1 min after the deployment of peripheral graft limb.

Differences between these specific times were evaluated by one sample t-test, Kolmogorov smirnov test, friedman test and pearson correlation (p< 0,05).

**Results:** There was significance difference in CO in comparison two anesthetic technique in times (i), (ii) and (iii).

Also there was significant difference in SV between two groups in (i) and (ii) time period.

The same findings we had in SVV in (iii) and (iv) times.

**Conclusions:** The spinal anesthesia (EVAR) provides better hemodynamic stability in comparison with the general anaesthesia (TEVAR).

Also there were differences between two groups in vascular tone (SVV), in (iii) and (iv) times, considering the need for low blood pressure in TEVAR technique.

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**ESRAS-0484**

**E-POSTER VIEWING**

**MISCELLANEOUS**

**A NOF IS ENOUGH; AN AUDIT OF POST-OPERATIVE HB CHECKS AND DELAYS TO TRANSFUSION**

Watson C., Saxena S. Croydon University Hospital, Anaesthetics, London, United Kingdom.

**Background and Aims:** The aim of this audit was to analyse the average time to check post-operative haemoglobin (Hb) levels, and the average length of time between surgery and blood transfusion in patients undergoing surgical fixation of a fractured neck of femur (NOF).

**Methods:** All patients who underwent surgical fixation for a neck of femur fracture between March 2017 and October 2017 at Croydon Hospital were included (n=106). Pre-operative and post-operative Hb levels and time to first post-operative Hb check, were obtained for all patients. Of those meeting criteria for transfusion, the mean time to transfusion after surgery was noted.

**Results:** The mean time to first Hb level result was 23.55 hours. Eleven patients met criteria for transfusion. In this group the mean time for the first post-operative Hb check was 24 hours. Nine out of the eleven patients were transfused post-operatively with a mean time to blood transfusion of 33.2 hours.

**Conclusions:** There is a delay in obtaining an Hb level and a knock-on effect of delaying time to transfusion for NOF patients in our hospital. A new Hb pathway aimed at improving patient safety has been created for the early postoperative period to guide the management of these patients. Staff in recovery have had training to understand the importance of low Hb and education of the new pathway. As part of this audit the trust guidelines on the management of neck of femur fracture patients has also been updated. Results are currently being re-audited and will be published for the ESRA conference.