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63. POSTOPERATIVE WOUND INFILTRATION WITH LEVOBUPIVACAINE 0.5% VIA PCA PUMP AND IN BOLUS DOSES DOES NOT IMPAIR HAND GRIP STRENGTH **S. Kvolik¹, D. Djapic², D. Kristek³, V. Horvat⁴, M. Kristic⁵, T. Ruzman⁶**

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Background and aims: Postoperative wound infiltration with local anesthetic delivered in the proximity of brachial plexus may produce hand weakness. This study was aimed to evaluate hand grip strength in the women undergoing breast cancer surgery with axillary lymph node dissection and postoperative (PO) wound infiltration analgesia.

Methods: An institutional ethics committee approval was obtained prior the study. A total of 39 women signed informed consent and were randomly assigned to two postoperative wound infiltration groups with levobupivacaine 0.5%. In the patient controlled analgesia group (PCA, n=20, mean age 54.7 years) 3-5 mg/h levobupivacaine was continuously delivered via PCA pump with 10 mg bolus and lockout interval 2 hours. Bolus group (n=19, mean age 55.3 years) was given levobupivacaine 0.5 mg/kg three times daily through catheter placed in the wound. Rescue analgesics were diclofenac for visual analogue scale (VAS) ≤ 3 and meperidine for VAS ≥ 4 . Postoperative VAS was registered on the PO day 1, 2, 3, and 4, and grip strength using handheld dynamometer Riester before surgery and on the fourth PO day. A statistical analysis was performed using T-test.

Results: A mean VAS in the movement was 2.6, 1.6, 1.5 and 0.2 in the PCA vs. 2.3, 1.1, 0.9 and 0.5 in the bolus group on the day PO 1, 2, 3 and 4, $p > 0.05$. Mean preoperative and postoperative hand grip strength on the operative side did not differ significantly between groups. It decreased significantly in the PCA group as compared to baseline (from 0.39 to 0.35 bar, $p = 0.03$), and remained unchanged in the bolus group (0.36 vs. 0.35, $p > 0.05$). Numbness of the fingers was observed in the one patient in bolus group.

Conclusions: Both analgesic regimens were effective and well tolerated. Hand grip strength was not clinically impaired in any group.