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FINAL PROGRAMME AND ABSTRACT BOOK
P1.13. ASSOCIATION OF SMOKING WITH SUBGINGIVAL MICROBIAL COMPOSITION IN YOUNG ADULTS, PRELIMINARY CROSS-SECTIONAL STUDY

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Introduction: Smoking is considered a major risk factor for the development and progression of periodontal diseases. The relationship of cigarette smoking to the composition of the subgingival microbiota is not clear. The aim of this study is to investigate how smoking in young adults without clinical signs of periodontal disease is associated with the prevalence of subgingival bacteria.

Materials and methods: This cross-sectional study was done on the consecutive sample from general population of smokers with good oral and systemic health and with no signs of periodontal disease. Clinical examination was performed on 23 young adults and their smoking history was recorded. The participants filled in a structured questionnaire recording their general health, socio-economic status and oral health habits. Pooled subgingival plaque samples were taken from first molars for further analyses. Microbiological analyses were performed with matrix-assisted laser desorption/ionization - Time of Flight method (MALDI-TOF) separately for aerobic and anaerobic bacteria.

Results: Median (interquartile range) of the number of detected anaerobic bacteria in total sample was 4 (3-5). Number of anaerobic bacteria was 2 (2-5). On this particular sample level number of aerobic bacteria was larger in smokers group (4.0 (2.8-5.3)) than in non-smokers group (3.5 (3.0-5.0)) and the number of anaerobic bacteria was larger in smokers group (3.0 (2.0-5.0)) than in non-smokers group (1.5 (0.0-3.0). None of these differences were statistically significant on this interim sample.

Conclusion: Even though there is no statistically significant difference, probably due to a small sample, the results of this study encourage us to conduct a large-scale study.

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P1.14. COMPARISON OF TWO METHODS FOR MEASURING SALIVARY MINERALS: CALCIUM, MAGNESIUM AND PHOSPHATE

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Introduction: The concentration of minerals in the saliva as calcium, magnesium and phosphate reflects many functions of saliva: remineralisation processes, buffering ability, oral microbiota and periodontal bone metabolism. Salivary minerals measurement is increasing in dental experimental and clinical research. The aim of this study was to evaluate two different laboratory methods for estimation of salivary calcium, magnesium and phosphate concentration.

Materials and methods: Unstimulated salivary samples were obtained from healthy subjects (N=23). Concentration of salivary minerals Mg, Ca and P were measured by two methods: standard spectrophotometry method and high-pressure microwave assisted inductively coupled plasma mass spectrometry (ICP-MS) method. Data were compared and tested for the strength of a relation between two groups of variables for each salivary mineral.

Results: Concentration of salivary Mg and salivary P measured by standard spectrophotometry was significantly correlated to concentration measured by microwave assisted ICP-MS method, Mg (r=0.64, p<0.05), P (r=0.61, p<0.05). Concentration of salivary Ca measured by standard spectrophotometry was not correlated to concentration measured by microwave assisted ICP-MS method.

Conclusions: Standard spectrophotometry and microwave assisted inductively coupled plasma mass spectrometry are consistent for measuring salivary magnesium and phosphate but not for salivary calcium. Because salivary minerals
measurement is increasing in popularity, it is important to be aware of the different results generated by these two methods for salivary calcium.

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P1.15. THE ROLE OF ENDOTHELIN B RECEPTOR IN BONE METABOLISM IN TOOTH MOVEMENT IN ANIMAL RAT MODELS
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The aim of this study was to determine the role of ETB receptor in bone metabolism via signal pathway ERK/MAPK in tooth movement in animal rat model by using olanzapine which stimulates the ERK/MAPK pathway.

Fifty-nine male animals were divided into 4 groups: ETB knockout (KOETB) group, KOETB olanzapine group, wild type (KOBWT) group, KOBWT olanzapine group. All animals were fitted the appliance consisted of a super elastic closed-coil spring. The olanzapine groups were given olanzapine (per os 2 mg /kg body weight) 3 weeks before the start of tooth movement and during the experiment. Tooth movement was measured from day 0 to day 35. At the end of experiment bone histomorphometry was performed and gene expression levels for cathepsin K, osteocalcin and DMP1 were determined.

The amount of tooth movement was significantly less in KOBWT olanzapine group compared to KOBWT group (p<0.05) on day 35. Alveolar bone volume and osteoblast volume was significantly greater in KOBWT olanzapine group compared to KOETB olanzapine group (p<0.001; p<0.01). Osteoclast volume was significantly decreased in KOBWT animals then in KOETB animals receiving olanzapine (p<0.01). The expression level of cathepsin K was significantly upregulated in KOETB and KOBWT olanzapine groups in comparison with animals receiving no olanzapine (p<0.05). The DMP1 gene expression level was less in KOETB group compared to KOBWT group (p<0.001).

We assumed that endothelin receptor B is directly involved in bone modelling during tooth movement in animal rat model via ERK/MAPK signal pathway and by clearance of ET-1.

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P1.25. STANDARD OF CARE IN THE TREATMENT OF TONSILLOPHARYNGITIS IN PRESCHOOL AND SCHOOL CHILDREN

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Introduction: Inappropriate use of antibiotics is one of the major causes of bacterial resistance. Penicillin is recommended as the first choice drug for streptococcal tonsillopharyngitis. Our main objectives were to evaluate both the frequency of use of throat swabs in diagnostic purposes and the prescribed antibiotic therapy in children with the diagnosis of bacterial tonsillopharyngitis.

Material and methods: An observational, retrospective study was conducted in the pediatric departments of the Public Health Center of Sarajevo. Data were collected from the available medical records from preschool and school subgroups of pediatric patients.

Results: A hundred of preschool and school children (56 girls) were included in the study. Upper respiratory tract infections were more often observed in preschool (92%) compared to school children (86%). Out of those, higher percentage of preschool (42%) compared to school children (36%) suffered from tonsillopharyngitis. Throat swabs were significantly more frequently analysed in preschool compared to school children (79.4% vs 48.6%; χ²=7.100, p=0.008). Streptococcus was detected in 35–50% of all clinically diagnosed tonsillopharyngitis cases. Prescription of beta-lactam antibiotics was shown to be preferred treatment of tonsillopharyngitis in all children. The preschool children were most frequently treated by cephalosporin and school children by penicillin, most frequently by amoxicillin and clavulanic acid.

Conclusions: Although penicillin is recommended as the first choice drug for streptococcal tonsillopharyngitis, physicians tend to prescribe cephalosporins to preschool children.

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P1.26. FARMANA – CROATIAN LANGUAGE IN THE WORLD OF PHARMACOLOGY

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Main communication in science for presenting your work and results on the international conferences or publishing the paper is English. Scientists from all over the world use English written literature to update their knowledge and to communicate with each other. English language here works as conductor and link between scientists worldwide, bypassing language barrier. Problems occur when textbooks, articles or reports needs to be written in Croatian language, because there are different opinions and numerous options for same word. Another problem is usage of newly formed foreign word in Croatian adaptation among patients and healthcare practitioners, which is increasing rapidly with time. The aim of FARMANA project is to build Croatian terminology database in the field of pharmacology. FARMANA protocol gathers term collection from reference pharmacology books and identifies problematic and uncritically taken term from foreign language giving suggestion in Croatian, matching the meaning. All terms with definitions will include their equivalents in English and will be developed following the recommendations of Institute of Croatian Language and Linguistics. Present and new pharmacology terms will be adjusted, with special care for the new pharmacology domains. The project is conducted in cooperation with Croatian Universities with Medical schools in Zagreb, Split, Rijeka and Osijek. FARMANA is funded by the Croatian Science Foundation as part of STRUNA project and supports two basic areas of the National Strategy for Science Development – development of information technology and sociocultural transition. The project will gradually improve the circulation of knowledge and information in the Croatian language, facilitate the involvement of Croatian scientists, health care providers and medical students in international projects and last, but not the least, it will facilitate physician-patient
communication in practice.

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P1.27. INTER-PROFESSIONAL PHARMACOTHERAPY WORKSHOP: INTERVENTION TO IMPROVE HEALTH PROFESSIONALS’/STUDENTS’ ATTITUDE TOWARD PHYSICIANS – PHARMACISTS’ COLLABORATION

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Introduction: The rapid advancement in pharmacotherapy concomitantly increases the possibility of medication errors. Collaboration between physicians and pharmacists is recognized as an important factor for reducing medication errors and improving patient outcomes. The aim of this study was to determine the influence that inter-professional pharmacotherapy workshop can have on students’ and professionals’ attitude toward physician – pharmacist collaboration.

Materials and Methods: Participants were medical (n=42, 4th-6th year) and pharmacy students (n=38, 4th-5th year) for the students’ workshop, and physicians (n=18) and pharmacists (n=23) for the professionals’ workshop. Three complex clinical cases were presented during the workshops. All participants were given general information about cases while different specific information was given to medical students/physicians and to pharmacy students/pharmacists. Medical and pharmacy students/professionals were not allowed to exchange their specific information only for the first case. The attitude toward physician – pharmacist collaboration was measured using the questionnaire “Scale of Attitudes Toward Collaboration Between Pharmacists and Physicians” (SATCP2), at the beginning and at the end of the workshop.

Results: Before the workshop, pharmacists and pharmacy students (52.1±4.1 and 58.8±3.7) showed more positive attitudes than physicians and medical students (48.3±3.9 and 48.1±7.3). However, the workshop closed the gap and equated health professionals’ attitudes (52.4±5.2 vs. 52.1±6.1 for pharmacists and physicians, respectively). The workshop affected attitude of all students, as shown by the increase of 10% for medical students and 2.2% for pharmacy students.

Conclusions: The inter-professional pharmacotherapy workshop seems to represent an efficient approach in promoting collaboration for both students and health professionals.

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P1.28. CLINICAL PHARMACY SUMMER SCHOOL IMPROVES THE ABILITY OF COMMUNITY PHARMACISTS TO DETECT DRUG-RELATED PROBLEMS (DRP)

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Introduction: Drug-related problems (DRPs) are undesirable events experienced by the patient thought to be due to drug therapy. They are associated with significant morbidity and mortality. Community pharmacists are in great position to detect and prevent or resolve drug-related problems.

Materials and Methods: Williams et al. describe a well-designed and validated survey-based clinical knowledge measurement tool which can be used to assess the ability of pharmacists to detect DRPs (1). The same survey-based clinical knowledge measurement tool was used to screen the clinical knowledge of the community pharmacists before and after the