THE SECTION OF PEDODONTISTS AND ENDODONTICS MEETING AT THE ASSOCIATION OF DENTISTS IN THE FEDERATION OF BOSNIA AND HERZEGOVINA - OCTOBER, 2024. SARAJEVO

ABSTRACTS OF INVITED LECTURES

Field of Dentistry: PREVENTIVE DENTISTRY
Type of presentation: invited lectures

HEALTHY HABITS: THE IMPACT OF NUTRITION, SOCIAL MEDIA AND EDUCATION ON THE GENERAL AND ORAL HEALTH OF CHILDREN AND ADOLESCENTS

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ABSTRACT

The influence of social media increasingly shapes behaviors and attitudes, particularly among younger generations. Exposure to a vast amount of information online often makes it difficult for users to distinguish between accurate and inaccurate content, which can lead to the spread of misinformation, especially regarding nutrition and health.

It is crucial to implement age-appropriate educational programs to ensure that preventive efforts are effective and do not cause harm, while also guaranteeing children and adolescent to receive accurate information about healthy lifestyle habits, including nutrition. The principles of proper nutrition include understanding what is in food, with a special focus on "hidden ingredients" such as additives, sugars, and sodium, which can negatively affect health. Macronutrients (carbohydrates, proteins and fats) are essential for energy and proper bodily function, while micronutrients (vitamins and minerals) are vital for healthy physiological processes and are found in fruits, vegetables, nuts and dairy products. Proper meal balancing involves including all food groups to maintain optimal energy levels and health. Breakfast is especially important, as it provides energy to start the day, while school snacks should be healthy and light to avoid burdening the body with heavy foods during the school day.

In addition to proper nutrition, maintaining oral health is also crucial, particularly for children and adolescents. Proper nutrition directly impacts oral health—consuming foods rich in sugars, carbonated drinks, and unhealthy snacks can lead to cavities and tooth damage.

Age-appropriate education on proper oral hygiene practices, such as regular tooth brushing, flossing, and dental visits, is an important part of preventive measures. Students should be informed about how food impacts their dental health—especially the harmful effects of sugar and "hidden ingredients" that contribute to tooth enamel erosion.

Field of Dentistry: PREVENTIVE DENTISTRY
Type of presentation: invited lectures

CARIES STATUS OF SCHOOL CHILDREN WITH TYPE 1 DIABETES MELLITUS IN RELATION TO METABOLIC CONTROL

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ABSTRACT

Diabetes mellitus manifests as a group of symptoms associated with the disruption of carbohydrate, fat, and protein metabolism due to insufficient insulin secretion and/or a lack of its activity in tissues. The aim of this study was to determine the differences in the dental status of children with Type 1 Diabetes Mellitus (T1DM) compared to healthy children.

Dental status assessment (recording teeth with caries, fillings, and extractions) was conducted according to WHO criteria to calculate the DMFT index. A flat dental mirror and dental probe were used for determining dental and caries status. The study included 90 participants, comprising schoolchildren aged 12–18 years residing in the Sarajevo Canton area. The participants were divided into two groups. The experimental group consisted of 60 children diagnosed with T1DM, further divided into two subgroups:

1A: 30 participants with controlled HbA1c levels ($\leqslant$6.8%)

1B: 30 participants with elevated HbA1c levels (>6.8%).

The control group consisted of healthy participants without any diagnosed systemic diseases or diabetes mellitus, as verified through medical history.

The results of the study indicate that children with Type 1 Diabetes Mellitus have a significantly higher overall DMFT index compared to healthy children.

Field of Dentistry: ENDODONTICS
Type of presentation: invited lectures

CHALLENGES OF ENDODONTIC TREATMENT OF THIRD MOLARS

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ABSTRACT

Third molars are the most commonly impacted teeth in the dentition. This phenomenon is attributed to their distal position in the dental arch, lack of eruption space, and extended eruption period. However, epidemiological data indicate that slightly more than 44% of adult patients have at least one non-impacted third molar, which is an important clinical factor when planning dental interventions.

Endodontic treatment of third molars may be indicated for restorative, prosthetic, or orthodontic reasons. These teeth are often excluded from studies on root canal morphology, leaving a lack of data about their anatomy. Nonetheless, it is known that the root canal morphology of third molars is complex and highly unpredictable, requiring special caution during treatment. Misjudgments about the complexity of third molar roots and canals can significantly complicate the endodontic procedure. Incomplete instrumentation and improper canal obturation often lead to treatment failure.

This lecture will present the most common morphological types of root canals in maxillary and mandibular third molars, their variations, and clinical recommendations for achieving successful endodontic therapy.

Field of Dentistry: ENDODONTICS

Type of presentation: invited lectures

CBCT DIAGNOSTICS IN ENDODONTICS – CLINICAL, ETHICAL, AND ECONOMIC ASPECTS

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ABSTRACT

CBCT is a valuable diagnostic tool in planning endodontic procedures. Endodontists can use CBCT images to determine the optimal access point, angle, and working length for root canal treatment, reducing the risk of procedural errors. CBCT also aids in identifying additional canals or apical ramifications that may be missed using traditional imaging techniques, ensuring thorough cleaning and shaping of the root canal system.

The Radiological Society of North America (RSNA) emphasizes that CBCT diagnostics provide clinicians with enhanced understanding and perception of the existing pathology. Three-dimensional imaging offers the ability to plan treatment more effectively and successfully. It is important to note that while the human visual system has its advantages, it also has limitations, and the cognitive abilities of the clinician play a role in accurately interpreting CBCT images.

Modern digital radiographic systems are widely used in endodontic treatment preoperatively, intraoperatively, and postoperatively. CBCT diagnostics significantly improve understanding of the pathology, decision-making regarding diagnosis, and treatment planning. Image quality is critical in endodontics, facilitating precise interpretation of endodontic anatomy, identifying possible canal curvatures, and enabling postoperative evaluation and long-term outcomes of endodontic treatment. CBCT enables detailed three-dimensional evaluation of the tooth, maxillofacial skeleton, and the relationships among anatomical structures.

CBCT in endodontics provides not only three-dimensional assessment of the area of interest but also appropriate image resolution for detailed analysis of tooth anatomy and the surrounding alveolus. The European Society of Endodontology (ESE) guidelines recommend CBCT use in endodontics in limited cases, asit follows:

Diagnosis of periapical pathology with contradictory (nonspecific) signs and/or symptoms

Confirming causes of non-odontogenic pathology

Evaluation of maxillofacial trauma and/or treatment quality

Exceptionally complex assessment of root canal anatomy before orthograde endodontic treatment

Assessment of the causes of endodontic failure in planning surgical endodontic treatment

Evaluation and/or treatment of root canal resorption

Analyzing CBCT images requires expertise, clinical experience, and specialized software to make an accurate diagnosis and clinical decision. Clinicians can manipulate the 3D image to examine tooth and root canal anatomy from various angles and zoom in for a closer look. This allows precise assessment of the number, location, and morphology of root canals and identification of anatomical variations or pathological conditions that may influence treatment. In some cases, software tools enable treatment simulation based on CBCT images, helping dentists visualize treatment outcomes before implementation, which is beneficial for planning and anticipating potential challenges.

Finally, communication with the patient is key. The clinician explains the proposed treatment, goals, procedures, potential risks, and benefits, ensuring the patient is informed and actively involved in the decision-making process. These steps enable specialists to plan and execute treatments effectively based on CBCT imaging, considering each patient's specific needs and characteristics.

Despite these advantages, ethical considerations regarding indications and limitations, as well as the balance between benefits and potential harm to the patient, remain open to discussion. Additionally, questions of economic feasibility and the cost of CBCT imaging for patients in our region must also be addressed.

Type of presentation: invited lectures

REGENERATIVE PROCEDURES AFTER DENTAL INJURY – WHAT DO WE KNOW AND WHAT CAN WE DO?

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ABSTRACT

Aim: The lecture will present a detailed protocol for managing patients who have suffered dental trauma, from emergency admission to planning long-term treatment that fulfills both the patient's and the clinician's functional and aesthetic expectations.

The first step should always involve appropriate emergency care following dental trauma, from the initial contact with the injured patient to the conclusion of the first visit. Collecting anamnesis or hetero-anamnesis from an accompanying person is an extremely important factor for assessing the psychophysical condition of the traumatized patient.

When dealing with minor patients, it is crucial to differentially diagnose and consider the aspect of physical trauma in terms of abuse or neglect. Clinical examination, radiographic diagnostics, and vitality/sensitivity testing of the teeth precede the clinical diagnosis. Afterward, the patient can be optimally treated, as emergency intervention on a traumatized tooth is of utmost importance for the subsequent course of therapy and long-term prognosis.

The definitive treatment plan becomes clearer after assessing all progress achieved during the course of treatment, potentially involving collaboration with other dental specialties (prosthodontics, orthodontics).

The lecture will also cover topics such as proper splinting and stabilization of injured teeth, restoration of lost hard dental tissue using adhesive techniques and composite materials, and potential endodontic considerations and peculiarities of traumatized young permanent teeth.

Regarding the endodontic aspects, a specific challenge in dental trauma is posed by teeth with incomplete root development and non-vital pulp. These teeth are often highly demanding to treat, with clinical evidence showing the inferiority of traditional endodontic procedures.

The potential for applying regenerative endodontic therapy (RET) will be discussed in this lecture from both scientific and clinical perspectives.

ABSTRACT OF BOOK PROMOTION

"Fundamentals of Preventive Dentistry
with Clinical Applications in Practice"

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FUNDAMENTALS OF PREVENTIVE DENTISTRY WITH CLINICAL APPLICATIONS IN PRACTICE

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– Faculty of Dentistry with Dental Clinical Center
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ABSTRACT

This university textbook is divided into four sections and eight chapters. The first section focuses on patient motivation for preserving and enhancing oral health, as well as on the biological defense mechanisms present in the oral cavity, which serve as the first natural barrier against the development of numerous oral diseases.

The second and most comprehensive section addresses the prevention of hard dental tissue diseases, beginning with discussions on oral biofilm, dental plaque and the caries process concluding with the genetic and immunological aspects of dental caries and preventive measures for various population groups.

The third section examines the prevention of periodontal tissue diseases, while the fourth section deals with the prevention of diseases affecting other tissues and structures in the orofacial region (acquired orthodontic anomalies, orofacial injuries, and soft tissue diseases).

The text spans 817 pages, supplemented with 109 tables, 321 recent photographic illustrations, 22 diagrams, 5 charts, and 3 graphs. Depending on the type of conditions presented, the textbook conceptually covers all three levels of prevention where clinically acceptable and justified, often including various therapeutic measures in this context.

The book concludes with an index containing over 800 terms. It is the result of three years of collaborative work by 14 authors from the Faculty, University, and private practice, each contributing to sections and chapters aligned with their primary areas of expertise. Before the official publishing process, the text was reviewed by experienced specialists in the respective fields and young practitioners with strong foundational undergraduate knowledge, who provided suggestions and comments for improvement.

The textbook is designed for multidisciplinary use in undergraduate and postgraduate studies, as well as for continuous professional education.