

ABSTRACTS OF ORAL PRESENTATIONS

FIELD OF DENTISTRY: General dental praxis

Type of presentation: Oral presentation

INDICATIONS AND JUSTIFICATION FOR THE USE OF CBCT IN DENTAL DIAGNOSTICS

Ćosović Selma¹, Šehović Ineta², Suljić Hujic Džejma³, Repeša Komarica Merisa⁴, Filipović Goga Adisa⁵

¹Reception clinic, Faculty of Dentistry with the Dental Clinical Center of the University of Sarajevo

²Clinic for dental pathology with endodontics, Faculty of Dentistry with the Dental Clinical Center of the University of Sarajevo

³Clinic for Oral Medicine and Periodontology, Faculty of Dentistry with the Dental Clinical Center of the University of Sarajevo

⁴X-ray room, Faculty of Dentistry with Dental Clinical Center of the University of Sarajevo

⁵JU Health center with inpatient unit, Kakanj

ABSTRACT

Introduction: CBCT allows us to accurately diagnose the patient's condition and select the optimal therapy for dental procedures. We use this type of imaging as a diagnostic tool to identify pathologies of the oral and maxillofacial region and when planning therapeutic procedures in situations where standard radiographic imaging is not sufficient.

Material and methods: Conventional digital imaging prevents accurate diagnosis of some pathological conditions due to image overlapping and geometric distortion. The CBCT device generates a 3D image of dental structures, soft tissues, nerve pathways and bone structures in the craniofacial region. Through examples from clinical practice, the indications and justification for the use of CBCT in relation to conventional digital imaging will be presented.

Discussion: The ALARA principle should always be taken into account when indicating the referral for this type of radiological imaging, especially in a sensitive patient group such as children.

Conclusion: CBCT is an excellent tool in modern dental procedures. However, as with any device that emits ionizing radiation, the benefits of using CBCT must outweigh the risks.

Keywords: CBCT, ALARA, radiological diagnostics.

FIELD OF DENTISTRY: Preventive dentistry

Type of presentation: Oral presentation

INCIDENCE OF BRUSHING TEETH OF A SIX-YEAR-OLDS IN THE AREA OF A CITY ZIVINICE IN THE YEAR 2023

Hodžić Belkisa^{*1}, Bajrić Elmedin², Omerkić Selam³, Butković-Bešić Mejra¹

¹Public health institution Health Center Živinice

²Faculty of Dentistry with a Clinical Dental Center of University of Sarajevo

³Doctor of dental medicine

ABSTRACT

Introduction: Proper and regular teeth brushing at young age, can help children develop healthy habits and teach them practice that can prevent caries development. Consistency of oral hygiene leads to healthy teeth from first primary tooth until old age. Goal of research is to analyze what is the incidence of brushing teeth among six-year-olds in the area of the city Zivinice.

Materials and methods: The research covered polling of parents of the six-year-olds in 2023, who came to examinations in the Public Health Center in Zivinice. Polling data gave us information about habits and practice among children.

Results: Research covered 50 children. From the survey questionnaire, it is affirmed: 74% of examinees brush their teeth twice a day, 16% of examinees do it more than twice daily, and 10% brush their teeth only once a day. 4% of parents claimed that their child brush teeth several times a week (2-6). 52% of parents said that their child from the start maintains oral hygiene with the occasional help, and 4% of the children from the start do it independently without their parent's or caregiver's help.

Conclusion: Based on the data obtained, it is concluded that incidence of teeth brushing among six-year-olds in 2023. in mentioned area is satisfying. Preventive measures and engagement of dentists in the previous years have led to improvement in oral hygiene among six-year-olds.

Keywords: teeth brushing, oral health, six-year-olds.

FIELD OF DENTISTRY: Endodontics

Type of presentation: oral presentation

ENDODONTIC AND SURGICAL RETREATMENT OF UPPER INCISORS

Planinić Ana*¹, **Tahmišćija Irmina**², **Hadžiabdić Naida**³, **Džanković Aida**², **Korać Samra**²

¹Health Care Center Mostar

²Faculty of Dentistry with Dental Clinical Center, Department of Dental Pathology with Endodontics, University of Sarajevo

³Faculty of Dentistry with Dental Clinical Center, Department of Oral Surgery with Dental Implantology, University of Sarajevo

ABSTRACT

Introduction: This case report describes the endodontic and surgical retreatment of teeth 11 and 12, 14 years after primary endodontic and surgical therapy, which was performed due to the consequences of trauma in an 11-year-old girl. The primary goal of this paper is to point out the need for longer follow-up of endodontic therapy outcomes.

Case report: A twenty-five-year-old girl presents to the Clinic for Dental Pathology with endodontics due to the development of a fistula in the projection of the apex of the upper right central incisor, which was also confirmed by a clinical examination. Analyzing the panoramic image taken in the same visit, inhomogeneous endodontic filling of the root canals and radiolucent zones in the periapical region of teeth 11 and 12 are observed. The same teeth are also noticeably shorter, which is a consequence of the initial apicotomy that the patient also mentions in the dental history. The origin of the fistula was determined by fistulography, and the size of the periapical change by segmental CBCT. The removal of the previous filling is approached with the help of ultrasound and endodontic revision files. The working length is determined by an orientational retroalveolar image with test gutta-perchas in the root canals, due to the inconsistent and unreliable display of the working length on the apex locator. Irrigation of the root canals was done with 3% NaOCl, while the final irrigation was done with 2% chlorhexidine digluconate, and after copious rinsing with saline solution. Intracanal calcium hydroxide medication is renewed every 20 days for 2 months. Due to the persistent fistula, and in consultation with

the oral surgeon, a new apicotomy was performed on teeth 11 and 12. Preoperatively, the root canals are obturated using the cold lateral condensation technique. On the retroalveolar image 3 months later, a reduction of periapical lesions is evident, and clinically the patient is symptom-free and without fistula. One year after the endodontic and surgical retreatment, the retroalveolar image shows the healing of the bone defect with the absence of signs and symptoms of periapical disease.

Conclusion: Dentists should be aware of the need for longer-term follow-up of endodontic therapy outcomes, especially those teeth with periapical changes due to their regression monitoring.

Keywords: endodontic retreatment, fistula, apicotomy, control examinations

FIELD OF DENTISTRY: Endodontics
Type of presentation: oral presentation

ROOT CANAL MORPHOLOGY OF MAXILLARY MOLARS

Džanković Aida*¹, **Hadžiabdić Naida**²,
Mahmutović Amra³, **Tahmišćija Irmina**¹, **Korać Samra**¹

¹Faculty of Dentistry with Dental Clinical Centre, Department of Dental Pathology with Endodontics, University of Sarajevo

²Faculty of Dentistry with Dental Clinical Centre, Department of Oral Surgery with Dental Implantology, University of Sarajevo

³Independent Researcher, amramahmutovic@hotmail.com

ABSTRACT

Introduction: This research aims to present the root canal morphology of maxillary third molars in population of Bosnia-Herzegovina using the cleaning procedure.

Material and methods: The study included 105 extracted maxillary third molars in total. Shortly after trepanation and removal of the pulp tissue, a dye was injected into the root canals and then eliminated through apical foramen by vacuum suction. Complete transparency of the samples was attained through the steps of the cleaning procedure. Maxillary third molars are categorized into 10 types (Alavi classification) based on the number and shape of the roots. The type of root canal (Vertucci classification), frequency of inter-canal communication and lateral canals were identified using a stereomicroscope (x15).

Results: Three fused roots (Alavi Group IV) and three root canals (type VIII of the Vertucci classification) are the most common features of maxillary third molars in the population of Bosnian-Herzegovina. Lateral canals and inter-canal communications are most common in the middle third of the root. The presence of additional root canal types was documented, particularly in groups with fused roots.

Conclusion: Maxillary third molars with root canal morphology appropriate for endodontic treatment are the rarest. Every patient requires a personalized evaluation of the endodontic therapy outcomes based on the morphology of their root canals.

Keywords: maxillary third molars, root canals, endodontic therapy

FIELD OF DENTISTRY: Endodontics
Type of Presentation: Oral presentation

EXTERNAL WHITENING OF MAXILLARY CENTRAL INCISOR WITH CALCIFIC METAMORPHOSIS – CASE REPORT

Halilović Mehinović Madžida*, **Tahmišćija Irmina**,
Hasić Branković Lajla, **Pašić Mirna**, **Begović Adna**

University of Sarajevo, Faculty of Dentistry with Dental Clinical Center, Department of Dental Pathology with Endodontics

ABSTRACT

Introduction: Calcific metamorphosis (CM) is characterized by obliteration of the pulp canal space after contusion or subluxation injury of the tooth which can be clinically detected as early as three months after injury. The aim of this paper was to provide details of aesthetic treatment approach of the tooth with calcific metamorphosis.

Case report: A 22-year-old female patient referred to the Department of Dental Pathology with Endodontics from Health Center of the Sarajevo Canton for the endodontic treatment in March 2024. In her medical history, she declared that she fell off from a bicycle in 2009, and was treated by a maxillofacial surgeon. She submitted all medical records with two orthopantomograms taken one and five years after the injury. Clinical examination revealed yellow discoloration, loss of transparency and position of the crown of tooth 21 suggesting previous lateral luxation injury. Compared to the contralateral maxillary incisor, a cold test was negative, while palpation and percussion were unremarkable. The RVG image revealed complete absence of contours of pulp chamber and root canals with intact lamina dura. Based on clinical examination and RVG image, calcific metamorphosis without periapical changes with discoloration of the tooth crown was diagnosed. It was decided to perform single-tooth external whitening. The whitening treatment was performed using 35% carbamide peroxide (The Smile Professional 35% Carbamide Peroxide, Unica, Italy) for 30 minutes through five sessions until satisfactory results.

Conclusion: After any dental trauma, long-term periodic follow-ups are necessary. Teeth without symptoms or radiographic signs of periapical pathosis with pulp canal obliteration that occurred after trauma do not need endodontic treatment. External whitening can be used in the management of discoloured teeth.

Key words: calcific metamorphosis, trauma, bleaching, obliteration of pulp space, whitening.

FIELD OF DENTISTRY: Oral Surgery
Presentation Type: Oral presentation

ALB-PRF AND H-PRF MEMBRANES IN HEALING LARGE CYSTIC DEFECTS

Hadžiabdić Naida^{*1,2}, **Sulejmanagić Nedim**²,
Tahmišćija Irmina³, **Džanković Aida**³, **Korać Samra**³

¹Faculty of Dentistry with Clinical Dental Center, Department of Oral Surgery with Dental Implantology, University of Sarajevo, Bosnia and Herzegovina

²Specialist Dental Clinic Sulejmanagić, Avdage Šahinagića 11, 71 000 Sarajevo, Bosnia and Herzegovina

³Faculty of Dentistry with Clinical Dental Center, Department of Dental Pathology with Endodontics, University of Sarajevo

ABSTRACT

Introduction: Platelets play a crucial role not only in stopping bleeding but also in tissue regeneration, collagen synthesis, angiogenesis and immune response. The concept of obtaining platelet concentrates manipulates normal physiological processes to obtain concentrated platelets and growth factors supporting wound healing and tissue regeneration. ALB-PRF represents a new platelet concentrate combining autologous albumin gel and platelet-rich fibrin (PRF) in a liquid form. This study explores the application of ALB-PRF in oral surgery practice with a focus on its regenerative role in bone defect filling after cystectomy.

Case Presentation: This paper describes the case of a sixty-one-year-old female patient diagnosed with a large cystic lesion in the upper anterior region during routine OPG examination as part of pre-prosthetic preparation. The patient reported a history of myocardial infarction and implantation of two stents. At the time of examination, she was in good psychophysical condition and asymptomatic.

As part of the surgical protocol, phlebotomy was performed in plastic additive-free tubes, which were centrifuged in a horizontal centrifuge at 700 rcf for 8 minutes. The upper 2/3 of platelet-poor plasma were then heated to 75°C for 10 minutes to obtain an albumin gel. The remaining platelet-rich plasma and growth factors were poured onto the cooled gel. After 15 minutes, the product known as ALB-PRF was congealed and ready for use. H-PRF membranes were obtained using the same protocol with red-capped tubes.

The surgery involved the extraction of residual tooth roots and cystectomy. During the procedure, it was noted that the cyst had destroyed a significant portion of the vestibular and partially the palatal bone and nasal mucosa. The cyst contents were dirty yellow in color. The bone defect was filled with H-PRF membranes and ALB-PRF using a sandwich technique. The mucoperiosteal flap was elongated, adapted over the defect and primarily sutured. Postoperative care included antibiotics, anti-inflammatory drugs and cold compresses. All follow-up examinations proceeded smoothly with excellent clinical and radiological healing.

Conclusion: This study highlights the potential of ALB-PRF as a safe and effective material for treating cystic defects in oral surgery practice. ALB-PRF has an advantage over conventional PRF membranes due to its slow-resorbing nature, which allows the prolonged release of growth factors and extends its regenerative potential.

Keywords: ALB-PRF, H-PRF, horizontal centrifugation, radicular cyst, healing

FIELD OF DENTISTRY: Oral Surgery
Presentation Type: Oral presentation

PREPROSTHETIC SURGERY OF BILATERAL MANDIBULAR TORI: A KEY STEP TOWARDS OPTIMAL PROSTHETIC REHABILITATION

Hadžiabdić Naida¹, Memišević Amina^{*2},
Mujić Sabina³, Neimarlija Jasmin⁴

¹Faculty of Dentistry with Clinical Dental Center, Department of Oral Surgery with Dental Implantology, University of Sarajevo, Bosnia and Herzegovina

²Dental Office Dens Sanus, Tabhanska bb, Visoko, Bosnia and Herzegovina

³Public Health Institution Health Center Kalesija, Senada Požegića, Kalesija Grad, Bosnia and Herzegovina

⁴Polyclinic Bandić, Antuna Branka Šimića 2, Sarajevo, Bosnia and Herzegovina

ABSTRACT:

Mandibular tori, a benign bony growth, is common on the inner side of the lower jaw or its alveolar extension. Although its causes are not fully understood, research suggests a multifactorial etiology involving genetic predispositions, environmental factors such as bruxism and disruptions in calcium and vitamin regulation. Clinically, tori are often bilateral and can vary in size. Although usually asymptomatic and without malignant potential, removal of mandibular tori is sometimes necessary especially before making complete dentures.

A case of an elderly female patient undergoing surgical correction of bilateral mandibular tori as part of pre-prosthetic preparation is presented. A precise surgical procedure, including the piezo surgery technique in combination with chisel, was performed under local anesthesia. The postoperative course was regular and the wound healed successfully.

Conclusion: Mandibular tori removal is an important step in preparing patients for prosthetic rehabilitation. Precise surgical intervention enables adequate preparation of the oral environment for prosthetic replacements ensuring improved functionality and aesthetics of the patient's smile. This case illustrates the successful application of contemporary surgical techniques in pre-prosthetic surgery.

Keywords: Bilateral mandibular tori, pre-prosthetic surgery, piezo surgery

FIELD OF DENTISTRY: Dental implantology
Type of presentation: Oral presentation

IMPRESSION METHODS IN IMPLANTOPROSTHETICS

Karović Merima, Kurtović Dženita*, Kazazić Lejla

University of Sarajevo, Faculty of Dental Medicine with Dental Clinical Center, Bosnia and Herzegovina

ABSTRACT

According to the definition, an impression is a negative imprint of hard and soft tissues in the mouth. In the digital protocol, analog impressions have been replaced with scanning and in that case, an impression is a positive imprint of hard and soft dental tissues.

When crafting an implant-prosthetic piece, it is important to transfer a precise three-dimensional positioning of an implant, as well as its relation with the neighboring structures in the mouth, into the dental laboratory. The situation of the mouth is transferred through impressions. In the implant-prosthetic therapy, two impression methods are used: analog (conventional) and digital impressions. Analog (conventional) impressions can be done using the methods of open and closed tray. The impression can be done on the abutment and on the implant level. When it comes to digital impression, it is necessary to use the intraoral scanner and its additional parts for scanning. All methods have their indications, as well as their advantages and disadvantages.

The aim of this thesis is to describe the most commonly used impression methods, the process of the impression, impression materials, and to highlight the importance of the impressions in the implant-prosthetic therapy.

Key words: implant-prosthetics, conventional impression, digital impression, implant