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ABSTRACTS of the 4th INTERNATIONAL CONGRESS OF CONTEMPORARY PEDIATRIC DENTISTRY

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Editor-in-Chief
Burak BULDUR

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Contemporary Pediatric Dentistry aims to serve as a forum for scientifically based information in pediatric dentistry, with the intention of continually expanding the knowledge base in this area. The journal aims to promote the highest standard of education, practice, and research in pediatric dentistry world-wide.
The Contemporary Pediatric Dentistry's broad readership consists of pediatric dentists, dentists, and all academicians, researchers, specialists, and general practitioners interested in pediatric dentistry.
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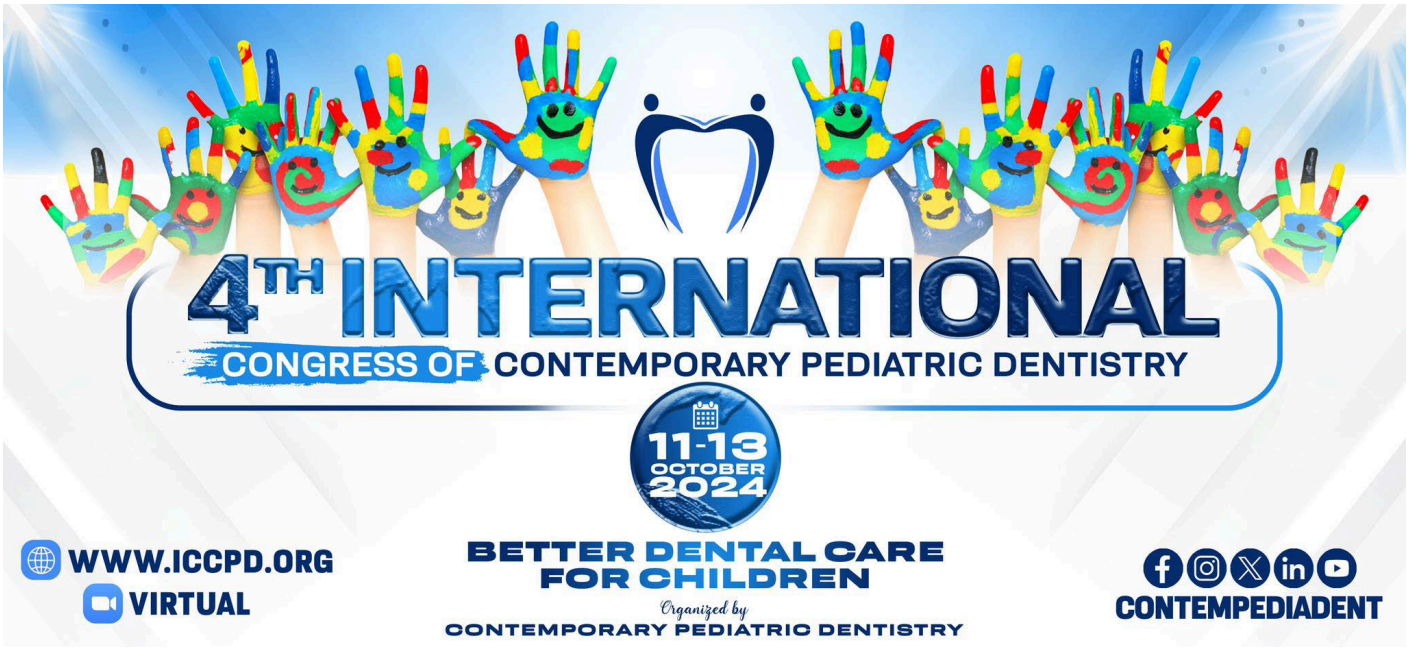

ICCPD 2024 at a glance

Website WWW.ICCPD.ORG	**Date** 11-13 OCT 2024	**Theme** BETTER DENTAL CARE FOR CHILDREN	**Topics** ALL ASPECTS OF PEDIATRIC DENTISTRY	**Language** ENGLISH
TIME ZONE GMT (GMT + 0)	**Speakers** WORLD-CLASS KEYNOTE SPEAKERS	**Abstracts** TO BE PUBLISHED IN THE SPECIAL ISSUE OF CONTEMPORARY PEDIATRIC DENTISTRY	**Benefits of Attendance** *CERTIFICATE OF ATTENDANCE *30 DAYS ACCESS TO RECORDED PRESENTATIONS *NETWORKING OPPORTUNITIES	**VENUE** VIRTUAL

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4TH INTERNATIONAL CONGRESS OF CONTEMPORARY PEDIATRIC DENTISTRY (ICCPD 2024) KEYNOTE SPEAKERS

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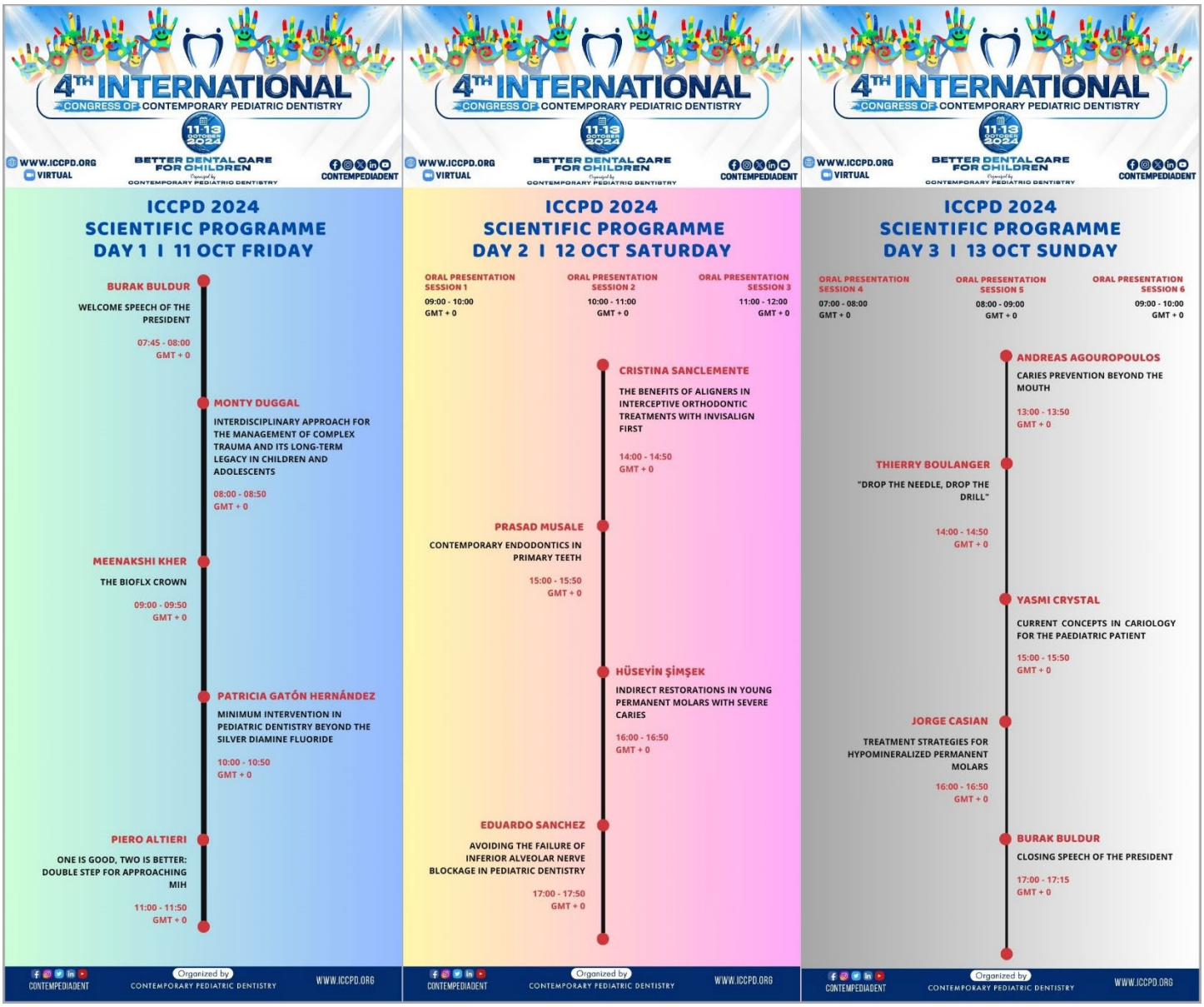
4TH INTERNATIONAL CONGRESS OF CONTEMPORARY PEDIATRIC DENTISTRY (ICCPD 2024) SCIENTIFIC PROGRAMME



Oral Presentation

OP1

ABSCESSED PRIMARY TEETH: COULD THEY HAVE A CHANCE TO SURVIVE? A CASE SERIES

Iman Khaled Elareibi

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Lesion sterilization and tissue repair (LSTR) is a relatively new biological approach for managing carious lesions with periapical involvement. The concept involves using a triple antibiotic mixture in a suitable vehicle to disinfect the root canal system. This case series presents the treatment of four patients aged 5 to 7 years using the LSTR technique with triple antibiotic paste in primary molars exhibiting gross dento-alveolar abscesses and internal resorption. The follow-up revealed healing of the periapical lesions and reversal of the internal resorption process in all four cases. LSTR is considered an alternative treatment procedure compared to traditional endodontic treatment or extractions in primary teeth with periapical involvement and internal resorption.

Oral Presentation

OP2

LASER APPLICATIONS AND THEIR CLINICAL EFFECTS IN PEDIATRIC DENTISTRY: A REVIEW

Tuğba Yıldırım, Arife Kaptan

Department of Pediatric Dentistry, Faculty of Dentistry, Sivas Cumhuriyet University, Türkiye

The use of laser technology, which is one of the minimally invasive approaches in pediatric dentistry, is important for maintaining oral health in children and ensuring patient cooperation. The aim of this review was to present the clinical application areas, advantages and disadvantages of lasers in pediatric dentistry in the light of current literature. Lasers can be used in the detection of dental caries in children, removal of decayed tissue from teeth, soft tissue surgery, fissure sealant applications, providing antibacterial effects, treatments such as capping and amputation, and vitality tests. In addition, the use of laser in treatment has advantages such as reducing the need for local anesthesia, providing a hemostatic effect, and protecting enamel and dentin tissue that are not affected by caries. They also cause less pain, vibration and pressure in children compared to treatments performed with traditional techniques. This causes less anxiety and fear in children during dental treatment and increases patient cooperation. Therefore, it is important and necessary for pediatric dentists to use lasers at the right wavelength in treatment as an alternative to traditional methods.

Oral Presentation

OP3

SUSTAINABLE ORAL HYGIENE PRACTICES FOR ECO-CONSCIOUS ADOLESCENTS

Bethany Lasky[1], Segun Olujide[2]

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The aim of this presentation is to promote sustainable oral care habits among dental professionals, with a focus on aligning these practices with the eco-conscious values of adolescents. This involves educating dental professionals about the environmental impact of traditional oral hygiene products and practices, highlighting innovative and sustainable alternatives that benefit both dental health and the planet. The presentation will equip dental professionals with the knowledge and tools necessary to guide adolescent patients in adopting eco-friendly oral care routines and foster a community of practice committed to sustainability. A comprehensive literature review was conducted to examine existing knowledge and recommendations on sustainable oral hygiene options, complemented by an online analysis of current trends and preferences among adolescents. The synthesized information will provide up-to-date guidance on the effectiveness of various sustainable techniques and products. As dental professionals, it is imperative to stay informed about evolving trends and interests in oral health, particularly the growing concern among eco-conscious adolescents and other demographics regarding environmental impact. Given the extensive use of single-use products in dentistry, enhancing awareness of strategies to mitigate this ecological footprint is crucial. Familiarity with biodegradable and zero-waste dental products is essential, as is the adoption of sustainable practices that benefit both health and the environment. Additionally, dental professionals must be equipped to offer practical guidance on integrating eco-friendly habits into oral hygiene routines.

Oral Presentation

OP4

TOOTH BRUSHING PRACTICES OF CHILDREN IN AL-JOUF REGION OF SAUDI ARABIA DURING COVID-19 LOCKDOWN

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Department of Pediatric Dentistry, Sri Balaji Vidyapeeth (Deemed-to be-University), Pondicherry, India

Aim: Residing at home during Covid-19 lockdown and disruptions to children's brushing habits may result in their oral health being neglected. This study aimed to assess the tooth brushing practices of children in Al-Jouf region of Saudi Arabia during Covid-19 lockdown period.

Methods: A cross-sectional study was conducted among the children aged 3 to 14 years in Al-Jouf region of Saudi Arabia. A self-administered questionnaire was developed based on the questions of previous studies. The instrument was composed of demographic data and four questions related to frequency and timing of tooth brushing practices during and after Covid-19 lockdown. A total of 248 parents/caregivers responded to the questionnaire. Statistical analysis was done using Chi-square test and Wilcoxon-signed rank test.

Results: The findings of this study revealed that significant changes were observed regarding parents helping their younger children while brushing their teeth during the lockdown period and elder children brushing their teeth before going to sleep. Most of the children were brushing their teeth fewer times a day and there was no significant change in tooth brush timing during and after the lockdown period.

Conclusions: Changes in tooth brushing practices during Covid-19 lockdown period highlights the importance of oral hygiene practices in children. Pediatric dentists should encourage the parents to maintain their children's oral health regularly.

Oral Presentation

OP5

TREATMENT APPROACH FOR UPPER CENTRAL INCISORS WITH EXTRUSIVE AND INTRUSIVE LUXATION INJURIES: A CASE REPORT

Esra Ergün, Canan Bayraktar Nahir

Department of Pediatric Dentistry, Gaziosmanpaşa University, Türkiye

Dental trauma accounts for approximately 5% of all injuries, with the upper central incisors being most frequently affected. Intrusive luxation is the axial displacement of a tooth into the alveolar socket, while extrusive luxation involves the partial displacement of a tooth out of its socket, with damage to the periodontal ligament fibers and potential disruption of the pulp's neurovascular supply. This case report presents the 12-month follow-up of a patient with extrusive and intrusive luxation injuries in the upper central incisors after pulp treatment. An 8-year-old male patient presented to Tokat Gaziosmanpaşa University, Faculty of Dentistry, Department of Pedodontics, one day after experiencing dental trauma. Clinical examination revealed extrusive luxation of tooth 11 and intrusive luxation of tooth 21, both with open apices. Due to the third-degree mobility of tooth 11, a dental trauma splint was applied. The decision was made to monitor tooth 21 for spontaneous re-eruption. Three weeks later, regeneration treatment was initiated for tooth 11, which showed a negative response to cold testing and positive percussion findings. At the 12-month follow-up, root canal obliteration was observed in tooth 11. Tooth 21 had re-erupted without any clinical or radiographic symptoms. This case illustrates the management of intrusive and extrusive luxation injuries in teeth with open apices and highlights the potential for root canal obliteration following regenerative treatment.

Oral Presentation

OP6

EVALUATION OF THE CLINICAL AND RADIOGRAPHIC SUCCESS OF LESION STERILIZATION AND TISSUE REPAIR THERAPY IN INFECTED PRIMARY MOLAR TEETH USING 3MIX-MP

Rüveyda Nur Culfa, Pınar Demir

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Aim: Lesion sterilization and tissue repair (LSTR) is a non-instrumental endodontic treatment method that has shown promising results in numerous clinical studies. This study aimed to evaluate the clinical and radiographic success of 3Mix-MP used in LSTR therapy.

Methods: This study included 28 mandibular primary molar teeth from 22 children, aged 4-10 years, who presented to Inonu University, Faculty of Dentistry, Department of Pediatric Dentistry, with signs of irreversible pulpitis or necrosis. Follow-up evaluations were conducted clinically and radiographically at 1, 3, 6, 9, and 12 months after treatment.

Results: Clinical success rates at 3, 6, 9, and 12 months were 100%, 100%, 100%, and 89.3%, respectively. Radiographic success rates were 100%, 89.3%, 78.6%, and 78.6%, respectively. There was a statistically significant decrease in clinical, radiographic, and overall success rates over time ($p=0.029$, $p=0.003$, $p=0.019$). Before treatment, 21 teeth (75%) presented with pain, while after LSTR therapy, 24 teeth (88.9%) showed no pain. The overall success rate was found to be 85.7%.

Conclusions: LSTR therapy with the 3Mix-MP mixture is a successful non-vital pulp therapy method. It can be applied quickly and does not negatively affect patient cooperation. This method may serve as an alternative to pulpectomy in primary teeth.

Oral Presentation

OP7

MULTIDISCIPLINARY APPROACH TO THE TREATMENT OF EXTRAORAL ABSCESS IN A PEDIATRIC PATIENT: A CASE REPORT

Büşra Güngör, Necibe Damla Şahin

Department of Pediatric Dentistry, Faculty of Dentistry, Gaziosmanpaşa University, Türkiye

Acute apical abscess is the most common form of dental abscess, resulting from an infection of the root canal. Although initially confined to the dentoalveolar region, the infection can spread to surrounding tissues if treatment is delayed, necessitating urgent intervention. A 13-year-old female patient presented to the Department of Pediatric Dentistry at Tokat Gaziosmanpaşa University with complaints of pain, swelling, and limited mouth opening. After antibiotic prophylaxis, the Department of Oral and Maxillofacial Surgery placed a surgical drain. The drain was removed after three days, and the surgical site was sutured. Root canal treatment was initiated on the same day. Following canal shaping, calcium hydroxide was applied as an intracanal medicament for two weeks. Once symptoms resolved, the root canal was permanently filled with gutta-percha and AH Plus sealer, and the coronal restoration was completed using composite resin. Clinical and radiographic evaluations at 3, 6, 9, and 12 months confirmed that the tooth remained asymptomatic and the periapical lesion had resolved. In conclusion, a multidisciplinary approach is crucial for achieving clinical and radiographic success in the management of extraoral abscesses in pediatric patients.

Oral Presentation

OP8

STAMP TECHNIQUE FOR OCCLUSAL RESTORATION APPROACH IN PEDIATRIC DENTISTRY: A CASE REPORT

Novita Sukma

Private Practice, West Java, Indonesia

This case report presents a restoration technique for an 8-year-old boy who presented with complaints of cavities in both anterior and posterior teeth. During the initial visit, the child appeared cooperative, but the mother mentioned that he had difficulty keeping his mouth open for extended periods. According to the anamnesis, the mother also noted that the patient struggled to maintain proper oral hygiene. There was no significant medical history. Clinical examination revealed dental caries in the lower permanent first molar. During the first visit, radiography and oral prophylaxis were planned to educate the patient on maintaining oral hygiene. A diagnosis of reversible pulpitis was made, and the patient was scheduled for restoration using the stamp technique. The stamp technique is employed for posterior tooth restoration and begins with the creation of an occlusal matrix. The goal of this technique is to achieve accurate and natural occlusal contact. It offers several advantages, including a shorter procedure duration, minimal use of instruments, and reduced polishing time. This case report highlights the effectiveness of the stamp technique for restoring posterior teeth in children. The stamp technique is particularly useful for young patients who require a shorter treatment time. Restoration in pediatric dentistry demands an efficient approach and the right technique, and the stamp technique can be a suitable option to minimize chair-side time for children.

Oral Presentation

OP9

ASSESSMENT OF AWARENESS AND PERCEPTION REGARDING CONSCIOUS SEDATION AMONGST THE DENTAL HEALTH PROFESSIONALS IN PUNE CITY: A CROSS-SECTIONAL SURVEY

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Aim: This study aimed to examine the awareness and perception of conscious sedation among dental health professionals in Pune city.

Methods: A total of 300 dental health professionals responded to the questionnaire. The participants were categorized into three groups: (a) General Dentists, (b) Undergraduate students, and (c) Postgraduate students. The questionnaire consisted of 25 questions classified into the following conceptual categories: (a) Demographic Data, (b) Awareness, (c) Knowledge, (d) Practice, and (e) Attitude towards conscious sedation. The confidence interval was set at 95%, and the alpha error (level of significance) at 5%. The power of the study was set at 80%. The Chi-square test was used to assess the association between demographic factors and awareness and perception of conscious sedation.

Results: An overall response rate of 100% (300/300) was obtained. Of the respondents, 50% (n=150) were female dental practitioners, and 50% (n=150) were male dental practitioners. Thirty-six percent of participants were aware of the term "conscious sedation," and 33.3% were aware of its potential complications. A significant proportion—16%—believed that conscious sedation is generally safe for use in dental practice. Additionally, 14.6% of participants agreed that the benefits of conscious sedation outweigh the risks. Only 24.3% of participants were familiar with recent advances in conscious sedation. Among the respondents, 31.3% reported having conscious sedation as part of their undergraduate education. A majority (68%) felt the need to incorporate conscious sedation into their dental practice, and 66% expressed a desire to attend training programs on the topic. Furthermore, 70% of participants reported feeling confident in explaining the indications, risks, and benefits of conscious sedation to parents before performing dental treatment on a child.

Conclusions: Dentist should receive detailed education on conscious sedation in their undergraduate and postgraduate education. In addition, it is necessary to increase awareness and knowledge about conscious sedation.

Oral Presentation

OP10

EVALUATION OF PARENTAL SATISFACTION OF STAINLESS STEEL CROWNS AND BIOFLX CROWNS IN PRIMARY MOLARS

Munazza W. Tambat, Amol S. Patil, Yusuf K. Chunawala

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Aim: The study aimed to compare parental satisfaction with BioFLX crowns (BFCs) and stainless steel crowns (SSCs) in primary molars (PMs).

Methods: Children aged 4 to 7 years were recruited to provide 50 paired teeth requiring crowns on PMs. Parents were recalled to evaluate their satisfaction with the crowns through a survey. A questionnaire was administered to parents/guardians, asking about their perceptions of SSCs and BFCs. The questions covered aspects of the child's oral health, the attractiveness of the crowns, and any difficulties the child may have experienced with the crowns. Parents were also asked to provide their overall satisfaction with the crowns. A dichotomous ("yes/no") questionnaire was used. Statistical analysis was conducted using the Pearson chi-square test.

Results: The study achieved a 100% response rate (50/50). Post-treatment, 12 parents (24%) reported pain and soreness in their child's jaws, with 8 cases associated with SSCs and 4 with BFCs. Only 6% of parents (n=3) observed their child holding food in their mouth for an extended period, all of whom had BFCs. Additionally, 13 parents (26%) reported difficulties with normal chewing, with 10 cases linked to BFCs and 3 to SSCs. Four parents (8%) indicated that their child preferred soft-textured food, all in the BFC group. No parents reported issues such as clicking sounds, jaw deviation, or difficulty opening/closing the jaws post-treatment. However, 4 parents (8%) complained of food deposition, all related to BFCs. Discomfort post-treatment was reported by 12 parents (24%), all associated with SSCs. Five parents (10%) observed swollen and bleeding gums, exclusively in the SSC group. No complaints of gum tightness were recorded. All 50 parents (100%) expressed satisfaction with the appearance and color of BFCs.

Conclusions: BioFLX crowns may be considered an esthetic alternative to stainless steel crowns in the future.

Oral Presentation

OP11

EFFECTIVENESS OF THE MYOBRACE APPLIANCE FOR THE TREATMENT OF FUNCTIONAL MOUTH BREATHING IN CHILDREN AGED 6–12 YEARS: A SYSTEMATIC REVIEW

Nisha Chavan, Iqbal Musani, Rooposhi Saha

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Mouth breathing is a common oral health concern in children, potentially leading to complications such as anatomical obstructions (e.g., palatine and pharyngeal tonsil hypertrophy, deviated nasal septum, nasal polyps, turbinate hypertrophy, and allergic rhinitis) and oral diseases. When no obstructive etiology is present, the condition is referred to as functional mouth breathing. Children with severe mouth breathing may develop "adenoid faces," characterized by incomplete closure of the upper lip, narrowing of the upper teeth, retro-positioned lower incisors, elevated front teeth, a retro-positioned hyoid bone, and a narrow or V-shaped palatal arch. Oral myofunctional therapy (OMT) is a treatment approach aimed at improving malocclusions by retraining the musculature and respiratory patterns. Studies have shown that children with mouth breathing often exhibit increased anterior facial height and overjet, reduced overbite, and a narrower maxillary arch, all of which can improve with myofunctional therapy. The Myobrace device is a myofunctional tool used to correct mouth breathing and malocclusion without the need for traditional braces. The purpose of this study was to assess the effectiveness of the Myobrace device for oral breathing therapy in children aged 6 to 12 years. Data were collected through a literature search of articles published between 2016 and 2022 from PubMed, Cochrane, Wiley, Google Scholar, and ScienceDirect. Keywords used included "mouth breathing," "Myobrace," and "orofacial myofunctional therapy." Ongoing research aims to further explore how the Myobrace device can serve as an alternative treatment for mouth breathing in children, improving their overall health by correcting bad habits and malocclusions without the need for future orthodontic intervention.

Oral Presentation

OP12

MANAGEMENT OF NON-SYNDROMIC OLIGODONTIA IN CHILDREN: A REPORT OF TWO CASES

Mhiri Hela, Chalbi Manel, Chemli Mohamed Ali

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Non-syndromic oligodontia is a congenital anomaly affecting both primary and permanent dentition, characterized by the absence of multiple teeth, ranging from oligodontia to anodontia. Managing this condition in children presents challenges due to its aesthetic, functional, and psychological implications. In Case 1, a 10-year-old child presented to our pediatric department with functional problems. Clinical and radiographic examinations revealed the absence of several teeth, including 17, 27, 15, 25, 22, and the crypts of 28 and 18 in the maxilla, with teeth 14 and 24 in infraocclusion. In the mandible, teeth 46, 45, 44, 34, and 35 were missing, with the persistence of primary molars 74 and 84. The patient had no molar contact in static occlusion, with only the incisors touching in a proalveolar position, and a diastema was noted between the upper incisors. The primary challenge was to reestablish occlusion and mastication using both upper and lower prostheses. In Case 2, a 14-year-old girl presented with missing teeth, with a family history suggesting a genetic cause but no other symptoms. Her primary concern was aesthetics, and static occlusion was achievable despite the missing teeth. Treatment involved placing ceramic crowns on the lower incisors and using a combination of composite (Moule Odus) and Ribbond for the upper jaw to address her aesthetic concerns. The management of non-syndromic oligodontia in children requires a personalized approach that addresses both functional and aesthetic needs. Treatment must be tailored to each case, considering the child's age and psychosocial factors. A multidisciplinary approach with ongoing follow-up is essential to ensure optimal outcomes in both dental function and overall quality of life.

Oral Presentation

OP13

PREVALENCE OF ECTOPIC ERUPTION OF PERMANENT FIRST MOLAR TEETH IN 5- TO 7-YEAR-OLD CHILDREN: A RETROSPECTIVE STUDY

Özlem Beren Satılmış[1], Nur Sena Önder[2], Akif Demirel[1], Şaziye Sarı[1]

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Aim: This study aimed to investigate the prevalence of ectopic eruption of permanent first molars using panoramic radiographs.

Methods: This retrospective study was conducted using panoramic radiographs of 4,140 patients aged 5 to 7 years. The investigators recorded the presence or absence of ectopic eruption, the first molar tooth affected (right or left, unilateral or bilateral, upper or lower), and the degree of ectopic eruption. Ectopic eruption was classified into Grades I, II, III, and IV based on the resorption rate of the primary molars. Data were analyzed using Chi-Square analysis, with the level of statistical significance set at 5%.

Results: The overall prevalence of ectopic eruption was 2.37%. There was no significant difference in prevalence between boys and girls or between the right and left sides. However, the prevalence of ectopic eruption in the upper jaw was statistically significantly higher than in the lower jaw.

Conclusions: The eruption of permanent first molars in the upper jaw was identified as a significant predictive factor. In the early period of mixed dentition, these patients should be closely monitored, and potential ectopic eruptions should be diagnosed at an early stage.

Oral Presentation

OP14

IMPROVEMENT IN SLEEP FOLLOWING TONGUE-TIE RELEASE IN NEWBORNS AND INFANTS: A SYSTEMATIC REVIEW

Bilal Shaikh, Iqbal Musani, Amol Patil, Sumaiyya Shaikh

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This systematic review aimed to investigate the influence of tongue-tie release on the quality of sleep in newborns and infants. The objective was to assess the impact of tongue-tie release on sleep quality, duration, patterns, and snoring in newborns and infants. PRISMA 2020 guidelines were followed for this review. Data were collected from PubMed, Google Scholar, Science Direct, European PMC, and LILACS, covering the period from 2010 to 2023. The search terms included "tongue tie," "sleep," "newborns," and "infants" along with their synonyms. Randomized controlled trials, cohort studies, and cross-sectional studies that used questionnaires to evaluate sleep improvements in newborns and infants post tongue-tie release were included. Review articles, case reports, and studies focusing on children older than one year were excluded. The risk of bias was assessed using the ROBINS-I tool for cohort studies. After screening 264 articles, only three met the inclusion criteria. All included studies were prospective cohort studies with records taken through questionnaires filled out by the mothers of infants. The studies demonstrated a low risk of bias in terms of outcome measurement, and the GRADE approach indicated moderate-quality evidence. Significant improvements in sleep were observed in newborns and infants after tongue-tie release. There is a positive association between tongue-tie release and improved sleep in infants, with significant sleep improvements observed post-procedure. Tongue-tie impacting sleep can be an early indicator for intervention to prevent future craniofacial developmental issues. The field of sleep-disordered breathing and ankyloglossia is relatively new and requires further research. The included studies primarily focused on breastfeeding improvements post tongue-tie release, and other databases were not screened due to access limitations.

Oral Presentation

OP15

EARLY INTERVENTION STRATEGIES FOR PEDIATRIC ANTERIOR CROSSBITE: A CASE SERIES

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Aim: Anterior crossbite is a commonly encountered malocclusion in pediatric patients, characterized by the abnormal lingual positioning of maxillary anterior teeth relative to the mandibular anterior teeth. If not managed in a timely manner, it can lead to significant dental and skeletal discrepancies, including improper jaw growth, periodontal issues, and aesthetic concerns. Early diagnosis and intervention are critical for preventing long-term complications. This study aims to evaluate the effectiveness and outcomes of different treatment methods for correcting anterior crossbite in child patients.

Methods: This case series includes the correction of anterior crossbite in 6 child patients aged between 7-14 years, using different methods. Three patients were treated using removable orthodontic appliances with labiolingual Z springs, two patients were treated with slow expansion screws, and one patient was treated with a composite button. Additionally, elastics and stripping were used when necessary. Each patient underwent clinical and radiological evaluation to determine the severity of the crossbite, dental development stage, and the appropriate treatment method. Follow-up was conducted over one month to monitor treatment progress and outcomes. The duration of treatment, success rates, and post-treatment stability were assessed.

Results: The results demonstrated a high success rate in correcting anterior crossbite, with patients achieving ideal occlusion within 4-8 weeks for mixed dentition and 12-16 weeks for permanent dentition. Factors contributing to successful outcomes included early intervention, patient compliance, and appropriate selection of treatment modality. However, challenges such as appliance wear compliance and relapse potential were noted and addressed through strategic follow-up and maintenance protocols.

Conclusions: This case series highlights that, with timely intervention and appropriate orthodontic strategies, excellent functional and aesthetic outcomes can be achieved in the management of anterior crossbite in young patients.

Oral Presentation

OP16

TOOTHPASTES WITH LOW FLUORIDE CONTENT SUPPLEMENTED WITH SODIUM TRIMETAPHOSPHATE: A LITERATURE REVIEW

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The increased risk of enamel fluorosis in early childhood has led to the development of toothpastes with lower fluoride (F) content, without compromising their effectiveness against dental caries when compared to conventional formulations (i.e., 1,000-1,100 ppm F). The aim of the present study was to synthesize the available evidence on the association between fluoride and sodium trimetaphosphate (TMP) from "in vitro," "in situ," and "in vivo" studies, with an emphasis on their efficacy and mechanisms of action. A search for articles was conducted on the PubMed database using the keywords "Low-fluoride toothpaste," "trimetaphosphate," "enamel," and "caries," combined with the Boolean operator "AND." Six articles from 2013 and 2014 were identified, and two additional papers were included after analyzing the references of the initially selected articles. "In vitro" and "in situ" studies demonstrated that the combination of TMP with fluoride at low concentrations increased the availability and diffusion of fluoride, calcium, phosphate, and TMP into the dental biofilm and enamel, similar to conventional toothpaste containing 1,100 ppm F. The synergistic effect between fluoride and TMP also enhanced resistance to demineralization, improved remineralization, and prevented the development of subsurface lesions. These findings were confirmed by clinical trials in children, which demonstrated a significantly lower caries increment among those using toothpaste with 500 ppm fluoride supplemented with TMP. This validated the protective effects on deciduous and permanent teeth during exfoliation, as indicated in the literature. Despite the reduction in fluoride concentrations in toothpaste, TMP supplementation significantly protects dental enamel from the action of bacterial acids that cause caries. Additionally, phosphate supplementation can reduce the risk of toxicity in infants and children, lower operational costs, and, if nanotechnology is employed, enhance the effects of microparticulate TMP.

Oral Presentation

OP17

TRAUMATIZED TEENAGE TEETH: CHALLENGES AND MANAGEMENT OF COMPLICATED CROWN-ROOT FRACTURES IN A 14-YEAR-OLD BOY

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A 14-year-old boy was referred for the management of extensive, complicated crown-root fractures on both upper central incisors in September 2019. The palatal fragments were removed, a gingivectomy was performed, and both canals were extirpated. A temporary denture was provided. Treatment was interrupted due to the COVID-19 pandemic. The patient was next seen in September 2020, presenting as an emergency. The central incisors were root treated, fiber posts and composite cores were placed, and 3D-printed hybrid composite-ceramic crowns (Permanent Crown Resin, Formlabs) were fitted. At the 2-year review, the crowns were discolored, and each had decemented once, but were otherwise adequate. There was no evidence of radicular pathology, and gingival maturation was noted palatally. Retention of these traumatized teeth has allowed for the preservation of alveolar bone and the patient's self-esteem. A fixed option was understandably preferred, and achieving an adequate ferrule facilitated restoration. Hybrid composite-ceramic crowns were chosen to provide highly aesthetic restorations that also permitted chairside modifications in the event of continued growth, which occurred in this case. The discolouration and decementation experienced are consistent with findings described in recent literature. Root treatment followed by post-crowns can restore aesthetics and function in teeth with crown-root fractures. Hybrid composite-ceramic crowns offer a fixed, aesthetic, and modifiable solution in growing patients, though they may be prone to discolouration and decementation. Crown-root fractures are challenging to manage. This case demonstrates how traumatized teenage teeth with limited coronal tissue can be restored with fixed prostheses, while accommodating the changes associated with continued dental growth. This case also reflects on material selection and highlights the challenges of managing dental trauma during a pandemic.

Oral Presentation

OP18

DISTRIBUTION OF VON MISES STRESS ON ROOT DENTIN OF PRIMARY TEETH: A FEA STUDY

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Aim: To evaluate the von Mises stress of two NiTi rotary files with different cross-sections and conicity in primary root dentin using 3D finite element analysis.

Methods: Two blue heat-treated NiTi pediatric rotary files were scanned to obtain 3D models of the files. A 3D model of the mesiobuccal canal of a primary maxillary second molar was obtained from an STL file. The scanned images and STL files were then imported into software for finite element analysis. The 3D models were simulated, and torsion and bending forces were applied simultaneously.

Results: A higher stress gradient was observed in the first 1–2 mm of the cervical radius in both files. The Endogal Rotary Kids EK2 file exhibited the lowest stress (42.10 MPa). The external edge of the instrument's cross-section experienced higher stresses. Additionally, lower stresses were generated on the dentin by the Endogal Kids EK2 file.

Conclusions: The design of the file influences the mechanical response of the instruments. The cervical region of the root canal exhibited the highest stresses.

Oral Presentation

OP19

VIDEO GAME PLAYING AND ORAL HEALTH IN PRESCHOOL CHILDREN

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Aim: The aim of this study is to evaluate the relationship between preschool children's video game playing habits and their oral/dental health, as well as harmful oral habits.

Methods: Children aged 36–72 months were included in this analytical cross-sectional study. Those who played video games for at least 20 minutes every day were classified as 'daily gamers,' those who played video games one or two days a week were classified as 'occasional gamers,' and those who never played video games were classified as 'non-gamers.' Sociodemographic and anthropometric characteristics, oral care habits, screen usage patterns, abnormal oral habits, and oral health parameters were compared across the groups.

Results: Daily tooth brushing was more common in the non-gamer group compared to the daily gamer and occasional gamer groups ($p=0.009$). Thumb-sucking was more prevalent in the non-gamer group than in the other two groups ($p=0.013$). The plaque index and gingival index scores were higher in the daily gamer group than in the non-gamer group ($p=0.035$, $p=0.028$). However, the plaque and gingival index scores of the occasional gamer group were similar to those of the other two groups ($p>0.05$). A weak correlation was found between daily screen time and plaque index, gingival index, dmft, and dmfs scores in children who played video games either daily or occasionally ($p<0.001$).

Conclusions: Reducing daily screen time for preschool children who regularly or occasionally play video games may contribute to improved oral health.

Oral Presentation

OP20

ANALYSIS AND IMPLICATIONS OF FOOD ADVERTISEMENTS TARGETING INDIAN CHILDREN

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Aim: The increasing focus of food advertising on children is a growing public health concern, as it leads to higher consumption of unhealthy, ready-to-eat packaged foods. These products are often high in sugar, salt, and fats (HFSS), contributing to the early onset of non-communicable diseases such as dental caries. Children's purchasing choices are easily influenced by advertisements on television and other promotional platforms. Food advertisements targeting children commonly use fun, humor, and fantasy to appeal to them. Children's persistent requests, or "pester power," can significantly influence family purchase decisions. This study aimed to analyze the content of food advertisements directed at children on popular children's television channels.

Methods: A cross-sectional observational study was conducted by examining advertising content on five popular children's television channels over 20 days, totaling 80 hours of recordings. The data was screened for both program and non-program content, and food-focused advertisements targeting children were categorized into various food groups. The advertising tactics were identified and recorded, with coding for each tactic as present or absent. In case of disagreement between the two researchers, a third researcher's opinion was considered.

Results: The results showed that beverages and juices accounted for 39% of the advertisements. Advertising tactics like musical appeal (92%), humor (71%), and celebrity endorsements (71%) were commonly used. Beverages and juices heavily relied on celebrity sports endorsements, linking their consumption to popular figures. Additionally, nutritional claims (17.8%), intellectual health benefits (6.9%), and physical athletic health benefits (6.5%) were frequently employed in food marketing aimed at children.

Conclusions: The findings suggest that food marketing practices targeting children should be monitored and regulated to encourage healthier dietary choices.

Oral Presentation

OP21

COMPARISON OF THE FRACTURE STRENGTHS OF TWO PREFABRICATED ZIRCONIA CROWNS AND A PREFABRICATED GLASS FIBER CROWN

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Aim: This study aimed to compare the fracture resistance of two prefabricated zirconia crowns, specifically NuSmile and EZ-Pedo, with a prefabricated glass fiber crown, Figaro, under in vitro conditions.

Methods: A total of 39 extracted primary molar teeth were used. They were prepared according to the type of crown to be applied and cemented with resin-modified glass ionomer cement (n=13). The prepared samples underwent thermal cycling between 5°C and 55°C for 1000 cycles. For the fracture resistance test, force was applied at a rate of 0.5 mm/min perpendicular to the occlusal surface of the samples until fracture occurred. The maximum force at which fracture occurred was recorded in Newtons. The Kruskal-Wallis H test and Mann-Whitney U test were used for data analysis.

Results: When comparing the fracture resistance values of the restorative materials, a statistically significant difference ($p<0.05$) was found between the prefabricated glass fiber crown Figaro and the other materials, while the difference between the prefabricated zirconia crowns NuSmile and EZ-Pedo was not statistically significant ($p>0.05$). The highest fracture resistance value was observed in the prefabricated glass fiber crown Figaro, while the lowest value was recorded for the prefabricated zirconia crown EZ-Pedo.

Conclusions: The prefabricated glass fiber crown Figaro demonstrated the highest fracture resistance, while the prefabricated zirconia crown EZ-Pedo showed the lowest. No statistically significant difference in fracture resistance was found between the prefabricated zirconia crowns NuSmile and EZ-Pedo. The fracture resistance of the prefabricated crowns in this study was higher than the chewing forces typically encountered by primary teeth. However, further in vitro and in vivo studies are required to fully evaluate the success of these materials.

Oral Presentation

OP22

MOLAR INCISOR HYPOMINERALIZATION: KNOWLEDGE AND CLINICAL EXPERIENCE OF TUNISIAN DENTAL STUDENTS

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Aim: Molar incisor hypomineralization (MIH) is one of the most significant oral health conditions in pediatric dentistry. It typically affects at least one first permanent molar and may also be associated with permanent incisors. However, MIH has also been observed in primary molars and other permanent teeth. MIH presents a challenge for clinicians worldwide. Therefore, this study aimed to assess the knowledge and clinical experience of Tunisian dental students regarding MIH in children.

Methods: This was a cross-sectional survey based on a structured questionnaire consisting of 16 multiple-choice questions. Data regarding the diagnosis, etiopathogenesis, and clinical management of MIH were collected from final-year Tunisian dental students. The data were analyzed using the chi-square test in SPSS version 22.0.

Results: Out of 200 participants, 170 fully completed the survey. A significant proportion of students reported having encountered cases of MIH. Resin composite was the dental material most frequently used in treating MIH-affected teeth (44.3%). Esthetics was the most common factor influencing the selection of materials for treating MIH-affected teeth. Lecture notes were the primary source for MIH diagnosis. Additionally, 78.4% of the students reported difficulty distinguishing MIH from other developmental enamel defects.

Conclusions: While most students were familiar with MIH in theory, their knowledge of its diagnosis and treatment was limited. Therefore, it is essential to incorporate clinical training on MIH diagnosis into the practical sessions of pediatric dentistry courses.

Oral Presentation

OP23

THE RELATIONSHIP BETWEEN THE SEVERITY OF PERIAPICAL PERIODONTITIS AND MEAN PLATELET VOLUME (MPV) AND OTHER INFLAMMATORY MARKERS IN CHILDREN

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Aim: Delayed treatment of odontogenic infections may amplify the systemic effects of local infections in children. Studies investigating changes in systemic inflammation markers in children whose dental treatments are neglected are limited. This study aims to investigate the relationship between the severity of chronic apical periodontitis and the parameters of mean platelet volume (MPV), previously studied in relation to various inflammatory diseases, as well as neutrophilic granulocytes (NEUT), lymphocytes (LYMPH), and platelets (PLT).

Methods: A total of 104 healthy patients with periapical periodontitis, who underwent dental treatment under general anesthesia (GA) between 01.10.2023 and 01.09.2024, were included in the study. The periapical statuses were dichotomized as mild and severe. Periapical Index (PAI) scores of 2 or 3 were classified as 'mild,' whereas scores of 4 or 5 were classified as 'severe.' Complete blood count (CBC) parameters, including NEUT, LYMPH, PLT, and MPV, were recorded. A significance level of $p<0.05$ was considered in the study.

Results: Of the 104 patients included, 41 were in the mild periapical periodontitis group and 63 in the severe group. The average age of the children was 5.4±1.2 years. The results showed no significant differences between the mild and severe periapical periodontitis groups in terms of LYMPH, PLT, and MPV ($p>0.05$). However, the NEUT score in the severe periapical periodontitis group was statistically higher than in the mild group ($p<0.05$).

Conclusions: Our study observed that MPV, PLT, and LYMPH biomarkers were not associated with the severity of apical periodontitis, but the NEUT biomarker was elevated in cases of more severe apical periodontitis. This study may serve as a pioneering effort in evaluating the systemic effects of odontogenic infections, which typically manifest as local infections, using CBC parameters. However, more comprehensive, multi-center studies are recommended.

Oral Presentation

OP24

MINIMALLY INVASIVE AESTHETIC MANAGEMENT OF HYPOMINERALISED INCISORS

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A 13-year-old female patient presented with hypomineralized areas on the upper canines and incisors (teeth 13-33), with a particular aesthetic concern regarding the upper central incisors. The patient exhibited no functional or pain-related symptoms and sought treatment solely for cosmetic reasons. Desiring a conservative approach that avoided the removal of tooth tissue, the treatment plan focused on minimally invasive interventions. The initial diagnosis was Molar Incisor Hypomineralisation (MIH) with involvement of the upper canines. Treatment options discussed included no intervention versus a stepwise approach consisting of whitening, resin infiltration (ICON), and potential composite restoration. The patient expressed openness to stopping treatment upon achieving satisfactory aesthetic results. Treatment began with three weeks of at-home overnight whitening using 10% carbamide peroxide, aimed at reducing the contrast between the hypomineralized lesions and the natural tooth color. Following this, ICON infiltration was performed on the upper central incisors (teeth 11 and 21) under rubber dam isolation, adhering to the standard ICON protocol. The aesthetic outcome was pleasing, and the patient chose not to pursue further treatment, including composite restoration. This case highlights the value of early intervention in managing hypomineralized enamel while preserving tooth structure. A conservative, patient-centered approach led to a successful aesthetic outcome without compromising the integrity of the enamel.

Oral Presentation

OP25

THE RE-MIN PENTAD: ARGININE, ASPARTIC ACID, VITAMIN D, SELF-ASSEMBLING PEPTIDES IN ENAMEL REGENERATION – A MINIMALISTIC APPROACH

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Dental caries, particularly Early Childhood Caries (ECC), is one of the most common public health issues worldwide. The chronicity of carious lesions begins in the enamel, progressing into the dentin, then invading the pulp, and ultimately affecting the root surface and furcation area. This cascade of caries progression increases the complexity and skill required for treatment. Over the past few decades, the prevalence of root caries has reached alarming levels, largely attributed to sedentary lifestyles and poor dietary habits among children and adolescents. An imbalance between demineralization and remineralization in the oral environment leads to dental caries. The use of naturally available bioactive molecules in minimally invasive approaches, such as topical applications, to promote physiological remineralization is becoming increasingly important. Bioactive molecules such as arginine, DL-aspartic acid, vitamin D3, vitamins B6 and B12, polydopamine (PDA), bioactive glass 45S5 (BAG), and gallic acid with a pyrogallol moiety, along with naturally occurring self-assembling antimicrobial peptides such as P11-4, KR-12, and GA-KR-12, have shown promising effects in caries management. These molecules, commonly found in abundance in vegetables and fruits, have been proven to induce and accelerate enamel remineralization. This approach offers a more minimalistic and natural method of arresting and managing caries. This study presents a narrative review highlighting the topical application of naturally occurring vitamins, arginine, aspartic acid, antimicrobial peptides, and self-assembling peptides in caries regression and the acceleration of remineralization.

Oral Presentation

OP26

MARFAN SYNDROME ASSOCIATED WITH INFRAOCCLUDED DECIDUOUS TEETH: A LITERATURE REVIEW AND A RARE CASE REPORT

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Marfan syndrome is an autosomal dominant disorder affecting connective tissue, characterized by a wide spectrum of clinical manifestations involving multiple organ systems. The syndrome primarily impacts the skeletal, cardiovascular, and ocular systems, with orofacial features being well-documented in the literature. This article presents a comprehensive review of the oral manifestations associated with Marfan syndrome. A thorough literature search from 1965 to 2024 was conducted using the PubMed/Medline and ScienceDirect databases. The search strategy employed key terms such as "Marfan syndrome," "oral manifestations," and "dental manifestations" in various combinations. Citation lists from relevant references were examined, and additional reports were identified through hand searching. The search yielded 126 articles, of which 21 were included in the review. Numerous facial, oral, and dental manifestations have been reported in patients with Marfan syndrome. However, infraoccluded (submerged) teeth have rarely been noted in the literature, with only one case documented in 1966 involving a twin girl. Submerged teeth have not been widely recognized as a unique oral finding in Marfan syndrome. This case report highlights an 11-year-old patient with Marfan syndrome who presented with infraoccluded teeth, contributing new insights into this rare association. The treatment involved the extraction of the infraoccluded first primary molars, followed by referral to an orthodontist for further management.

Oral Presentation

OP27

KNOWLEDGE AND ATTITUDES OF DENTAL SURGEONS ON THE USE OF TOPICAL AND LOCAL ANESTHETICS IN CHILDREN: A CROSS-SECTIONAL STUDY

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Aim: In dentistry, local anesthetics are administered using various techniques to control pain during procedures. This study aimed to evaluate the knowledge and attitudes of dentists regarding the use of local and topical anesthetics, as well as to assess the utilization and types of anesthetics employed by pediatric and general dentists, and to determine the effectiveness of these anesthetics during pediatric dental procedures.

Methods: A cross-sectional survey involving 200 dentists, including pediatric dentists and general practitioners, was conducted. A questionnaire consisting of 20 questions was distributed through Google Forms. A reminder email was sent one week after the initial request, and only responses received within 8 weeks were included in the analysis.

Results: The response rate was 62%, with 65% of the participants being general dentists. Among respondents, 99% used lidocaine, 52% used 25-gauge needles, and 70% preferred conventional syringes. Regarding topical anesthesia, 36% administered it before local anesthesia, and 60% used a spray as the delivery system. Taste was considered the most important factor by 74% of respondents. Additionally, 91% of dentists reported not using newer drug delivery systems.

Conclusions: The study concluded that lidocaine is the most used anesthetic, with the 25-gauge short needle being the most frequently utilized. Newer methods of drug delivery were not widely adopted, indicating a need for increased awareness and improved delivery systems in dental practice.

Poster Presentation

PP1

TREATMENT MANAGEMENT OF RADICULAR CYSTS WITH DIFFERENT INTRAORAL APPLIANCES: A REPORT OF TWO CASES

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A radicular cyst is an inflammatory cyst of odontogenic origin, more commonly observed in permanent dentition than in primary dentition. These cysts typically develop due to apical infections caused by dental caries. When a radicular cyst occurs during the primary dentition period, it can alter the position of the underlying permanent tooth, potentially inhibiting its eruption. In this study, two 7-year-old male patients presented to our clinic with dental caries, and panoramic radiographs revealed radicular cysts at the roots of the primary molars in the right lower jaw. Following evaluation in the Oral and Maxillofacial Surgery department, the affected teeth were extracted, and drains were inserted. Fifteen days post-drain insertion, the drains were removed in the Pedodontics department, and impressions were taken using silicone impression material before reinserting the drains. One week later, a removable decompression appliance was applied to the first case, while a fixed decompression appliance was cemented in the second case per the parents' request. The first patient was instructed to remove the appliance only while eating and to wash the drain and cyst cavity with physiological saline. In the second case, due to the fixed appliance, the patient was only able to flush the drain. Both cases showed recovery within three months, with follow-ups scheduled at one-month intervals. The treatment of radicular cysts offers multiple options, with surgical consultation and patient cooperation being critical factors in the decision-making process.

Poster Presentation

PP2

OROFACIAL MANIFESTATIONS OF ROBINOW'S SYNDROME: A CASE REPORT IN A PEDIATRIC PATIENT

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Robinow syndrome, also known as "fetal face" syndrome, is an extremely rare genetic disorder characterized by distinct craniofacial, skeletal, genital, cardiovascular, and oral findings. The exact prevalence of this condition remains unknown, with approximately 200 cases reported to date, and an equal male-to-female ratio has been observed. The syndrome exhibits genetic heterogeneity, with both autosomal dominant and recessive forms, each associated with varying severity of phenotypic presentation. The autosomal recessive form is caused by mutations in the ROR2 gene (9q22), while mutations in the WNT5A gene (3p14.3) have been identified in fewer than 10% of patients with the autosomal dominant form. Robinow syndrome presents a broad clinical spectrum, with key craniofacial deformities including frontal bossing, midfacial hypoplasia, hypertelorism, wide palpebral fissures, and a short upturned nose. Skeletal features include short stature, mesomelic limb shortening, and small hands with brachydactyly. Genital hypoplasia is also commonly observed. Oral manifestations of the syndrome include retained deciduous teeth, ankyloglossia, arched palate, gingival hyperplasia, dental abnormalities, and delayed tooth eruption. This work aims to describe the general and orofacial manifestations of Robinow syndrome through the presentation of a case involving a 7-year-old girl referred to the pediatric dentistry service at the Casablanca Dental Consultation and Treatment Center for specialized consultation.

Poster Presentation

PP3

MULTIDISCIPLINARY TREATMENT OF ECTODERMAL DYSPLASIA: A CASE REPORT

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The most common type of ectodermal dysplasia is hypohidrotic ectodermal dysplasia (HED), characterized by reduced sweating (hypohidrosis), sparse hair (hypotrichosis), missing teeth (anodontia or oligodontia), and abnormalities in tooth shape. Patients with HED face challenges related to chewing, speech, and aesthetics. This case report presents the periodontal, orthodontic, and prosthetic treatment of a 12-year-old male patient with HED, managed through a multidisciplinary approach. Physical examination revealed thin hair, sparse eyebrows, dry skin, hyperpigmentation around the eyes, and wrinkles. Intraoral and radiographic examination showed the presence of permanent teeth 11, 21, 32, 42, 13, 23, 33, 43, 16, 26, 36, and 46, with teeth 13, 23, 33, and 43 yet to erupt. Additionally, primary teeth 55, 65, 53, 63, 73, and 83 were still present. The treatment plan involved the use of removable appliances following a frenectomy and orthodontic treatment. A frenectomy was performed between the maxillary right and left incisors, after which brackets were applied to teeth 53, 11, 21, and 63. Over six months, teeth 11 and 21 were moved closer together. The brackets were then removed, and teeth 11 and 21 were stabilized palatally with a retainer. Impressions were taken with C-type silicone from the upper and lower jaws, and a space maintainer with teeth was fabricated. After a trial fitting, the appliances were delivered and monitored for six months, during which the parents reported no issues. Multidisciplinary dental treatment for HED patients at an early age facilitates improved mastication and nutrition. Additionally, addressing aesthetic concerns positively impacts their social and psychological well-being.

Poster Presentation

PP4

SURGICAL TREATMENT OF SEVERELY INTRUDED PERMANENT INCISOR: A CASE REPORT

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This case report describes the management of dental intrusion in mature permanent teeth in a 12-year-old girl who presented to the emergency department 12 hours after a fall at school. Clinical and radiographic examinations revealed varying degrees of intrusion in teeth 11, 21, and 22. Immediate management involved the surgical repositioning of the intruded teeth using forceps, followed by semirigid splinting and the prescription of antibiotic medication. Seven days post-trauma, treatment with calcium hydroxide was initiated on the three traumatized incisors, and the splint was removed after one month. The patient was followed for two years, during which calcium hydroxide was regularly renewed until periodontal healing was sufficient to allow definitive endodontic treatment with gutta-percha. This case report underscores the value and limitations of surgical repositioning after dental intrusion, as well as the critical importance of early endodontic treatment and consistent follow-up.

Poster Presentation

PP5

MANAGEMENT OF HYPOMINERALIED MOLARS USING DIGITAL DENTISTRY: A CASE REPORT

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A 10-year-old patient presented to the Pediatric Dentistry Department at the Dental Consultation and Treatment Center in Casablanca for the management of her oral health. Clinical and radiographic examinations revealed molar-incisor hypomineralization (MIH), characterized by fragile enamel, hypersensitivity, and increased susceptibility to fractures and caries. The patient also exhibited a high level of dental anxiety. To restore the function and aesthetics of the affected molars, a multidisciplinary approach was implemented, utilizing aesthetic bonded restorations with the aid of digital dentistry. This method enhanced precision, reduced treatment discomfort, and alleviated the patient's stress. As a result, both clinical and aesthetic outcomes were significantly improved, and the overall treatment duration was reduced. The patient is currently undergoing follow-up, with a planned duration of two years.

Poster Presentation

PP6

FULL MOUTH REHABILITATION OF ECTODERMAL DYSPLASIA AND OLIGODONTIA: A CASE REPORT

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Ectodermal dysplasia is a rare congenital disorder characterized by the absence or defects in two or more structures of ectodermal origin, including the skin, nails, hair, sweat glands, or teeth. Oral manifestations of ectodermal dysplasia include multiple dental abnormalities such as hypodontia, anodontia, impacted teeth, peg-shaped or conical anterior teeth, and underdevelopment of the alveolar ridge. In this case, we present a 12-year-old male patient exhibiting typical features of ectodermal dysplasia without other systemic abnormalities. The patient was referred to our clinic with a complaint of missing teeth. Clinical examination revealed multiple missing permanent teeth and caries in the permanent first molars. Radiographic examination showed impaction of tooth #33, resorption of the roots of primary teeth, and the absence of eighteen permanent teeth. After obtaining informed consent from the caregivers, the impacted canine and resorbed deciduous teeth were extracted, and the carious lesions were restored. Primary lateral teeth were left to undergo spontaneous resorption for aesthetic reasons. The anterior teeth were restored aesthetically with strip crowns using composite resin, and the missing spaces were rehabilitated with a removable prosthesis. Periodic recall examinations were scheduled to monitor the patient's growth and its impact on occlusion and the fit of the prosthesis. Finding a permanent, long-term solution for rehabilitating missing teeth in pediatric patients with ectodermal dysplasia, whose growth is ongoing, presents significant challenges. Dentists should be familiar with the intraoral manifestations of ectodermal dysplasia, as this condition is associated with negative aesthetic, functional, and psychological outcomes.

Poster Presentation

PP7

MINIMUM INTERVENTION DENTISTRY IN THE MANAGEMENT OF EARLY CHILDHOOD CARIES LESIONS: A LITERATURE REVIEW

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Early childhood caries (ECC) is a disease characterized by the presence of one or more cavitated or non-cavitated carious lesions, or missing or filled tooth surfaces, in children 71 months old or younger. ECC is a chronic condition that requires appropriate management. Management should be guided by the principles of minimum intervention dentistry (MID), which aims to restore function, form, and aesthetics with minimal loss of tooth structure. Based on the extent of lesion removal, MID strategies for the treatment of ECC can be classified as non-invasive, micro-invasive, minimally invasive, and mixed approaches. Non-invasive strategies, defined by the absence of tooth hard tissue loss, include diet control, biofilm control, and remineralization techniques. Micro-invasive strategies involve altering the tooth's surface characteristics during acidification, resulting in the loss of only a few micrometers of hard tissue. These strategies also include the application of sealants and resin infiltration. Minimally invasive strategies, used for cavitated deciduous teeth requiring removal of dental hard tissue, focus on selective caries removal followed by long-lasting restorative techniques. Mixed strategies incorporate elements from the aforementioned approaches, such as the Hall technique and non-restorative cavity control. When selecting an MID strategy for ECC lesions, factors such as lesion activity, cavitation, and cleanability should be prioritized, along with considerations of caries risk, age, and dentition. A rational selection of an MID strategy should be based on up-to-date expert consensus guidelines. The primary goal of ECC management is to preserve the teeth in the oral cavity until natural exfoliation, ensuring they remain symptom-free while maintaining optimal form, function, and aesthetics.

Poster Presentation

PP8

MANAGEMENT OF ERUPTION CYST IN A CHILD PATIENT: A CASE REPORT

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This case report presents the conservative management of a unilateral eruption cyst in a 7-year-old boy who visited the clinic. The chief complaint was pain in the slightly mobile right maxillary primary central incisor, accompanied by swelling above the tooth. The child had no history of systemic disease or medication use. Intraoral examination revealed a pink, soft, fluctuant, localized swelling without a bluish color in the region of the erupting right maxillary permanent central incisor, present for two weeks. Early childhood caries were observed in the anterior maxilla, with no history of trauma or infection. An intraoral periapical radiograph showed the eruption of the maxillary permanent central incisors, with almost complete root resorption of the primary central incisors and no signs of bone involvement. Based on clinical and radiographic findings, the diagnosis of an eruption cyst was made. Due to the child's two-week complaint, the right maxillary primary central incisor was extracted under local anesthesia. Following the extraction, the cyst spontaneously ruptured, allowing the fluid and blood content to drain. At a follow-up visit two weeks later, the right maxillary permanent central incisor was observed to be erupting normally, and the swelling had completely resolved. In conclusion, eruption cysts are benign lesions of the oral mucosa, and differential diagnosis is crucial to providing appropriate treatment. While eruption cysts often resolve spontaneously, surgical intervention may be necessary in certain cases.

Poster Presentation

PP9

PRE-ERUPTIVE INTRACORONAL RESORPTION IN THE SECOND PERMANENT MOLAR: A CASE REPORT

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Pre-eruptive intracoronal resorption (PEIR) is defined as lesions located at the dentinoenamel junction within the dentin of unerupted teeth, typically detected incidentally on radiographs. These defects are commonly found in the central or mesial portion of the crown, although in some cases, they may extend to the pulp, potentially leading to symptoms such as swelling and pain. There is no systematically reported treatment protocol for PEIR; therefore, clinicians must base their decisions on factors such as the eruption status, lesion progression, size, and degree of pulp involvement. This case report presents an 11-year-old healthy male patient who visited the Pedodontics Clinic at Istanbul University with pain in tooth number 75. Radiographic examination revealed a radiolucent area near the pulp in the dentin of the unerupted tooth number 37. The patient had no complaints regarding the tooth, which was still undergoing root development. Surgical exposure and restoration of the unerupted tooth were planned. During the subsequent appointment, the gingiva was cauterized under local anesthesia. While the enamel was intact, the dentin was notably soft. The cavity, which extended close to but did not reach the pulp, was covered with a biomaterial, and a temporary restoration was completed using glass ionomer cement. Histological examination of the soft dentin tissue revealed loose, non-specific connective tissue rich in blood vessels. At the 3-month follow-up, the tooth was asymptomatic and had erupted enough to be permanently restored with a composite filling. Clinical and radiographic evaluations were continued every 3 months. At the 16-month follow-up, the tooth remained asymptomatic, fully erupted, and root development was ongoing. Identifying and reporting PEIR is crucial for clinicians to ensure accurate diagnosis, detailed characterization of the lesion, and the establishment of appropriate treatment protocols.

Poster Presentation

PP10

CHALLENGES IN THE DIAGNOSIS AND MANAGEMENT OF CELIAC DISEASE: A CASE REPORT

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Celiac disease is a chronic immune disorder of the small intestine triggered by gluten found in wheat, barley, and rye in genetically predisposed individuals. Often referred to as a "clinical chameleon," it remains undiagnosed in 90% of cases due to its broad and varied symptoms, which can range from asymptomatic to severe gastrointestinal issues. The National Institutes of Health stress that recognizing the diverse clinical features of celiac disease is crucial for diagnosis. Delayed diagnosis can result in serious complications, including nutritional deficiencies, reproductive disorders, autoimmune conditions, and intestinal lymphoma. Oral manifestations may serve as early indicators of celiac disease, sometimes appearing before gastrointestinal symptoms. In children, these signs include dental enamel defects, recurrent aphthous stomatitis, delayed tooth eruption, dental caries, angular cheilitis, atrophic glossitis, dry mouth, and a burning sensation on the tongue. A thorough oral examination can aid in the early detection of celiac disease. The primary management strategy is a strict, lifelong gluten-free diet, as even minimal gluten exposure can perpetuate the disease. Patients must remain vigilant about gluten in both food and non-food items, including cosmetics, medications, supplements, and dental products. While the FDA's "gluten-free" label is voluntary, it raises concerns about unknown products, particularly in dental settings. Dental professionals can improve patient care by documenting celiac disease, using gluten-free products, ensuring strict hygiene practices, and providing reassurance. Effective management involves not only dietary adherence but also prioritizing dental care. A multidisciplinary approach, involving dentists, pediatricians, and gastroenterologists, is essential to improving the quality of life and well-being of children with celiac disease. This case report presents the management of a diagnosed case of celiac disease.

Poster Presentation

PP11

SERVICE EVALUATION OF THE MULTIDISCIPLINARY CLINIC IN THE PEDIATRIC DENTAL SERVICE AT CHELSEA AND WESTMINSTER HOSPITAL

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Aim: A multidisciplinary approach to dental treatment offers significant benefits to patient care. The multidisciplinary clinic at Chelsea and Westminster Hospital adopts a comprehensive, holistic, and tailored approach to treatment planning for pediatric patients with special needs. The clinic operates in a hybrid model, utilizing both virtual and face-to-face appointments, led by pediatric dental specialists in collaboration with orthodontic and oral surgery specialists. This study aimed to assess the utilization and outcomes of patients treated at the multidisciplinary clinic.

Methods: A retrospective review of case records was conducted for patients seen in the multidisciplinary clinic from January to December 2023.

Results: During the review period, 11 hybrid clinics were conducted, comprising 29 virtual and 41 face-to-face appointments. The patients seen ranged in age from 6 to 16 years. A total of 44 patients, representing 73%, attended for first consultations, while 16 patients, or 27%, were seen for review appointments. Ten patients were not brought to their scheduled appointments. Of the patients seen, 22 were medically fit and well, while 38 had underlying medical conditions. Fifty percent of the patients were seen within two months of referral, while the remaining patients were seen within 10 months, with delays attributed to clinical needs. The most common diagnoses included dental caries, hypomineralization, poor prognosis of first permanent molars, impacted canines, and hypodontia. Fifteen patients were scheduled for joint treatment under general anesthesia with an oral surgeon, while 25 patients received treatment specifically from the pediatric dental team. Ten patients were discharged to their referring dentist, and three patients received shared care between a community dentist or general dental practitioner.

Conclusions: The multidisciplinary clinic at Chelsea and Westminster Hospital provides excellent, tailored care to pediatric patients. This approach reduces the number of clinics visits, maximizes the use of specialist clinical and non-clinical resources, enhances training opportunities, and improves communication methods with patients and care teams.

Poster Presentation

PP12

A COMPLICATED CROWN-ROOT FRACTURE IN THE MAXILLARY CENTRAL INCISOR: A CASE REPORT

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This report describes the treatment of a complicated crown-root fracture in an immature maxillary central incisor of a 9-year-old female patient. The clinical case highlighted the necessity of a multidisciplinary approach, including orthodontic extrusion, apexification with calcium hydroxide dressing, and prosthetic treatment using post-crown restoration. Traumatic lesions of the permanent dentition pose a daily challenge for pediatric dentists. Crown-root fractures (CRF) are described in the dental literature as one of the injuries affecting the hard tissues of permanent teeth, involving enamel, dentin, and cementum. When the pulp is involved, it becomes a significant complicating factor. Management of CRF is often complex, particularly when dealing with immature teeth.

Poster Presentation

PP13

MANAGEMENT OF RARE GENETIC DISORDERS: CASE STUDIES OF HAIM-MUNK AND PAPILLON-LEFÈVRE SYNDROMES IN PEDIATRIC PATIENTS

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Haim-Munk Syndrome (HMS) and Papillon-Lefèvre Syndrome (PLS) are rare autosomal recessive genetic disorders primarily characterized by severe skin and dental abnormalities. Both conditions result in early-onset periodontitis, leading to premature tooth loss and palmoplantar keratosis. PLS is marked by severe periodontitis, early tooth loss, and thick, scaly skin on the hands and feet, typically caused by a mutation in the cathepsin C (CTSC) gene. HMS shares many clinical features with PLS but also presents distinct symptoms such as arachnodactyly and acro-osteolysis. Diagnosis of both syndromes is confirmed through clinical examination, family history, and genetic testing for CTSC mutations. While prognosis improves with appropriate management, complications persist throughout life. Two male siblings, aged 4 and 9, presented to the Department of Pediatric Dentistry at Istanbul University with complaints of tooth mobility. Genetic testing confirmed their diagnosis of Haim-Munk Syndrome. Clinical examination revealed severe periodontal disease with tooth mobility scores of grades 2 and 3, though no other HMS symptoms were observed. The patients are monitored monthly, receive oral hygiene education, and undergo scaling procedures at each visit. Follow-ups are ongoing. Genetic testing confirmed homozygosity for the CTSC mutation in both siblings, with their father, brother, and sister being heterozygous carriers. Another patient, a 10-year-old girl with PLS, presented with periodontitis, hyperhidrosis of the hands and feet, and pronounced plantar creases. Her parents are related by a 1.5-degree consanguineous marriage. Genetic testing revealed that her mother, father, and sister are heterozygous carriers. The patient lost all her primary teeth by age 3 and has been fitted with upper and lower removable prostheses, attending regular monthly follow-up appointments for adjustments.

Poster Presentation

PP14

3D-PRINTED REMOVABLE SPACE MAINTAINER: A NOVEL DESIGN AND MANUFACTURING METHOD

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This case report presents the treatment of multiple primary tooth loss using a digitally designed and 3D-printed removable space maintainer. An 8-year-old male patient presented with extensive caries. After clinical and radiographic examination, it was decided to extract all primary molar teeth, and a 3D-printed removable space maintainer was planned. The extractions were completed, followed by a two-week healing period. Digital impressions were obtained using the 3Shape TRIOS 3 intraoral scanner (3Shape, Denmark). The removable space maintainer was designed using Exocad software (Exocad GmbH, Germany). The denture base (gingival part) was fabricated with flexible resin (Flexo Denture Base V2, Turkey), while the denture teeth were fabricated with permanent crown resin (Sprintray Crown Resin, USA). The teeth were cemented into their sockets with flexible denture base resin and further cured in glycerin. The washing and curing processes were completed using the Sprintray 3D printer system (Sprintray, USA). After polishing, the appliance was delivered to the patient. Both the patient and parent were instructed on the use and care of the removable space maintainer. The patient is under follow-up for clinical and radiographic evaluations. This case demonstrates the effective and practical application of digital dentistry in pediatric care.

Poster Presentation

PP15

ASSESSMENT OF ODONTOGENIC DIFFERENTIATION OF SHED SEEDED CHITOSAN SCAFFOLD AND BIODENTINE

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Aim: This study aimed to evaluate and compare the dentin bridge formation and odontogenic differentiation potential of SHED (Stem cells from Human Exfoliated Deciduous teeth) seeded onto chitosan scaffolds versus Biodentine as medicaments in pulpotomized teeth.

Methods: SHEDs were isolated from the pulp tissue of healthy human deciduous teeth using the explant culture protocol. The culture was analyzed for the expression of MSC-specific surface antigen markers CD73, CD90, and CD105, while lacking hematopoietic lineage markers CD45 and CD34, via flow cytometry. Sterilized chitosan scaffolds were pre-incubated in culture medium for 12 hours before cell seeding. A total of 2 x 10^5 SHEDs were seeded onto chitosan scaffolds in 24-well plates. Seeded constructs were incubated for 3 hours before the medium was added to allow cell adhesion. Constructs were cultured with regular media changes at 37°C and 5% CO_2 for up to 14 days. Cell viability, infiltration, and adhesion on scaffolds were evaluated using an MTT assay. Odontogenic medium, supplemented with KH_2PO_4, was used for subsequent induction experiments.

Results: SHEDs exhibited fibroblast-like morphology, and homogeneity of MSCs was maintained from passage 1 to passage 4. MSCs isolated from SHED using the sustained explant technique demonstrated differentiation into three lineages, confirming their stemness. Differentiated cells showed positive Alizarin Red staining, with the presence of characteristic rosette-like red nodules, indicating the formation of a mineralized matrix. SHED-seeded chitosan scaffold constructs exhibited odontogenic differentiation ability comparable to Biodentine, as evidenced by mineralized matrix deposition.

Conclusions: The SHED-chitosan construct demonstrated key regenerative properties, including stem cell-supporting ability, biocompatibility, pulp revitalization capacity, and odontogenic differentiation potential—desirable traits for biological medicaments. Further systematic exploration is needed to assess the clinical feasibility of SHED-chitosan scaffolds as part of biologically-driven treatment approaches for vital pulp preservation.

Poster Presentation

PP16

JUVENILE AGGRESSIVE OSSIFYING FIBROMA OF THE MANDIBLE: A CASE REPORT

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Juvenile aggressive ossifying fibroma (JAOF) is an uncommon, benign, yet potentially aggressive fibro-osseous neoplasm of non-odontogenic origin that affects the craniofacial bones. These lesions are typically asymptomatic, slow-growing, and often discovered incidentally on radiographic examinations or when patients present with facial swelling due to cortical expansion. Mandibular lesions are relatively rare, affecting younger patients and accounting for less than 10% of JAOF cases involving the facial bones. A multidisciplinary approach involving early diagnosis, appropriate treatment, and long-term follow-up is essential due to the high recurrence rate of these lesions. This case report presents a 10-year-old girl diagnosed with juvenile aggressive ossifying fibroma of the mandible, highlighting its clinical, radiological, and histopathological features. The lesion was treated with surgical enucleation and curettage, with no signs of recurrence observed after a three-year follow-up.

Poster Presentation

PP17

MANAGEMENT OF TRAUMATIC DENTAL INJURIES: A CASE REPORT

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Dentoalveolar injuries can occur as a result of direct or indirect trauma to the teeth, such as fights, traffic accidents, or playground accidents. It is reported that traumatic injuries to permanent teeth are most commonly seen in children and young adults, with the upper incisors being the most frequently affected. An 11-year-old female patient presented to our clinic 2 hours after a traffic accident. Clinical and radiographic examination revealed root fractures in the upper right anterior tooth (11) and upper left anterior tooth (21), with extrusion of the coronal fragment in tooth 21. The extruded 21 was repositioned with gentle finger pressure, and a flexible splint was applied. At the 2-week follow-up, slight mobility was still present in tooth 21. A positive response to the cold test was noted for tooth 11, but not for tooth 21. Root canal treatment was initiated on the coronal portion of tooth 21 up to the fracture line, and calcium hydroxide paste was applied. At the 4-week follow-up, no mobility was observed, and the splint was removed. The coronal portion of tooth 21 up to the fracture line was filled with Biodentine, and the root canal treatment was completed. No symptoms were observed at the 1-year follow-up, and the patient continues to be monitored. Success in dental trauma management depends on immediate intervention and consistent postoperative follow-up.

Poster Presentation

PP18

ORAL MANAGEMENT OF CHILDREN WITH INCONTINENTIA PIGMENTI AND ECTRODACTYLY ECTODERMAL DYSPLASIA CLEFTING SYNDROME: TWO CASE REPORTS

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Incontinentia pigmenti and ectrodactyly ectodermal dysplasia–clefting syndrome are rare forms of ectodermal dysplasia characterized by genetic developmental disorders affecting structures derived from the embryonic ectoderm. General manifestations include dermal, ophthalmic, and neurological changes, along with specific dental anomalies such as tooth agenesis, conical teeth, delayed tooth eruption, and cleft palate. Given these oral symptoms, the dentist plays a crucial role in managing dental treatment. The first case involves a 9-year-old child referred by a pediatrician to our pediatric odontology department for dental treatment. The child, diagnosed with incontinentia pigmenti, presented with multiple agenesis, conical first molars, and delayed eruption of the maxillary incisors. The treatment plan involved promoting oral hygiene, teaching proper brushing techniques, and placing a space maintainer to restore both aesthetics and orofacial functions. The second case concerns a 10-year-old girl with ectrodactyly ectodermal dysplasia–clefting syndrome (EEC), who presented to the pediatric odontology and prevention department at University Hospital Rabta with multiple decayed teeth. General examination revealed ectrodactyly, ocular keratitis, and angular cheilitis, while intraoral examination showed xerostomia, enamel hypoplasia of the maxillary central incisors, and collapse of the mandibular ridges due to oligodontia, sparing only the lower canines. Treatment for this patient included hygiene motivation, caries management, coronal restorations with composite resin, and the placement of a temporary mandibular removable prosthesis. Given the high prevalence of oral anomalies associated with these conditions, dentists play a critical role in diagnosing and referring patients to specialists in genetic diseases for appropriate diagnosis and multidisciplinary care.

Poster Presentation

PP19

RARE DISEASES WITH ORAL-DENTAL EXPRESSION: REPORT OF TWO CLINICAL CASES

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Case 1 involves an 8-year-old patient who presented to the Pediatric Dentistry Department at the Casablanca Dental Consultation and Treatment Center for prosthetic rehabilitation. A general clinical examination, oro-facial examination, and radiographic assessment revealed growth retardation in height and weight, bilateral blindness, a dysmorphic facial appearance characterized by prominent frontal bossing, and exophthalmia. Dentally, the patient exhibited retention of temporary teeth, except for tooth 74, and delayed eruption of permanent incisors and 6-year molars. Radiographic findings indicated root dental dysplasia in the retained teeth. These combined manifestations, researched through OMIM, led to a suspicion of GAPO syndrome (Anderson-Pindborg syndrome). Case 2 involves a 7-year-old patient presenting with delayed dental eruption. The diagnostic approach revealed growth retardation in height and weight, brachydactyly, and facial dysmorphism, including large protruding ears, a depressed nasal bridge, and epicanthic folds. Dentally, the patient exhibited retention of temporary teeth, except for teeth 63 and 74, while teeth 55 and 65 were not fully erupted in the arch. There was also delayed eruption of the permanent incisors and 6-year molars. These manifestations, also researched using OMIM, led to the suspicion of Kabuki syndrome. Both patients were referred to the Department of Medical Genetics and Molecular Biology for further evaluation and confirmation of the suspected diagnoses. A thorough anamnesis, along with general and dysmorphic examinations, should be systematically performed when oral-dental warning signs are present, as they may reveal syndromic dental anomalies requiring investigation for rare diseases.

Poster Presentation

PP20

DIGITAL DENTAL IMPRESSIONS IN PEDIATRIC DENTISTRY

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The aim of this review is to assess the effectiveness and acceptability of digital dental impression methods in pediatric dentistry. It also examines whether digital impressions can simplify the procedure for both patients and practitioners compared to traditional methods. The authors conducted a literature search using PubMed, Cochrane, and Embase databases, identifying relevant articles related to children and digital impressions. Studies were selected based on the quality of their methodology and overall sample size. Digital dental impressions significantly reduce the discomfort and stress often associated with traditional impressions, especially for younger children. Although there seems to be no difference in pain levels, gag reflex, breathing difficulties, smell, sound, taste, and vibration-related discomfort, as well as anxiety, were reported to be lower with digital impressions. Parents also appeared to prefer digital over conventional impressions. In children with MIH (Molar-Incisor Hypomineralization), digital impressions enabled the provision of definitive restorations due to high accuracy scanning. The results regarding chair time, impression time, and maximal mouth opening were inconsistent across studies, with no significant overall difference noted. In terms of cost, while conventional impressions initially appeared cheaper, after 3-4 years, the costs of both procedures equalized. Regarding accuracy, there was no significant difference in dental arch measurements between digital models and plaster casts. However, a significant difference was found when comparing these models to intraoral measurements. Promising results were also noted in maintaining treatment efficacy for patients with special needs or specific conditions, such as craniofacial disorders. In conclusion, digital dental impressions are a viable alternative to traditional methods in pediatric dentistry, offering a more comfortable and preferred experience for children, particularly those with special needs or dental anxiety. There is no strong evidence that the procedure requires less time. Future research should focus on the approaches and long-term effects of digital impressions on treatment efficacy.

Poster Presentation

PP21

ALTERNATIVE REHABILITATIVE TREATMENT FOR A PERMANENT FIRST MOLAR IN A PATIENT WITH HIGH SOCIAL RISK

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Dental caries is considered a public health issue due to its high prevalence and its impact on individuals' lives. Risk factors such as ethnicity, family income, maternal education level, knowledge of oral health, and dietary patterns have been associated with increased caries risk. This case report presents the rehabilitation of tooth 2.6 with a semi-direct composite resin restoration in a patient with high social risk. A 15-year-old male patient with social risk, attention deficit disorder, permanent dentition, high caries risk (DMFT 2), cleft palate, and multiple dental malpositions presented with pain in tooth 2.6. In March 2022, he was enrolled in the "Comprehensive Dental Care for Adolescents" Diplomate Program at Universidad de los Andes. Using non-pharmacological adaptation techniques such as anticipatory guidance, distraction, and positive reinforcement, sufficient cooperation was achieved for a clinical examination. A diagnosis of severe pulpitis was made, and biopulpectomy treatment was indicated. In June 2022, due to the patient's social risk and the cost challenges associated with indirect rehabilitation, a semi-direct composite resin restoration was chosen. Semi-direct composite resin restorations for posterior teeth with extensive tissue loss have emerged as an alternative to direct resin, amalgam, and ceramic restorations. By using a technique that allows extraoral fabrication of the restoration, clinical working conditions can be optimized. Understanding each patient individually is crucial to selecting the best treatment approach. The presented semi-direct restoration system is an excellent alternative for restoring dental health under minimal invasion criteria.

Poster Presentation

PP22

AUGMENTED REALITY TECHNOLOGY IN PEDIATRIC DENTISTRY

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This review aims to explore the essence of Augmented Reality (AR) in pediatric dentistry and summarizes the key information a pediatric dentist needs in practice. AR refers to the real-time integration of digital information into the user's environment, enhancing the perception of reality rather than replacing it. AR is divided into two types: marker-based and marker-less. Marker-based AR overlays digital content onto a physical trigger, such as a QR code, whereas marker-less AR relies on device sensors like GPS, accelerometers, and cameras to understand the user's environment in real time. AR has vast applications in diverse fields, particularly in healthcare. An electronic search was conducted on studies published over the past decade using Google Scholar, Academia, and ResearchGate, with keywords including pediatric dentistry and Augmented Reality. AR technology can address dental anxiety and behavior management through a combination of techniques such as Tell-Show-Do, modeling, desensitization, and distraction, bringing them together under one umbrella. Smartphone applications incorporating artificial intelligence can showcase post-treatment outcomes using patient selfies, particularly in cases involving esthetic crowns and interceptive orthodontic appliance therapy, where parental expectations may be unclear. AR also offers significant advantages in overcoming communication barriers, especially for parent education, by providing real-time intraoral images for dental treatments, including restorations, crowns, and space maintainers. Additionally, wearable devices and smartphone apps, similar to those used for monitoring daily steps, can assist in real-time monitoring of a child's caries risk. In conclusion, while AR technology has the potential to revolutionize pediatric dentistry, little is known about its credibility and trustworthiness with children. Future studies are needed, along with systematic guidelines within the pediatric dental community, to prevent misuse on social media and protect patient privacy.

Poster Presentation

PP23

REVASCULARIZATION VERSUS APEXIFICATION ($CAOH_2$ VS MTA) IN IMMATURE NECROTIC PERMANENT INCISORS: A CASE REPORT

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This clinical case report presents a comparison of possible treatment options for immature necrotic permanent incisors, illustrated by two cases of children treated in the Pediatric Odontology Department of the Dental Consultation and Treatment Centre in Casablanca, Morocco. The first case involves a 10-year-old boy who presented with recurrent fistulas in the immature maxillary permanent central incisors, which had been fractured following trauma two years prior. Management required apexification with calcium hydroxide on tooth 11, leading to the formation of an apical barrier after 12 months of follow-up. When apexification with calcium hydroxide failed on tooth 21, an apical plug with MTA was placed. Coronal restoration of both incisors was completed using composite layering. The second case involves an 8-year-old girl who presented with an apical abscess in the immature maxillary permanent central incisor (tooth 21) following iatrogenic treatment by a charlatan. Treatment consisted of pulp revascularization of tooth 21 after endodontic disinfection with calcium hydroxide, which resulted in increased root length and dentinal wall thickness 36 months after the initial treatment.

Poster Presentation

PP24

RESTORING THE ESTHETICS OF DISCOLORED ANTERIOR PERMANENT TEETH USING DEVITAL BLEACHING AND COMPOSITE RESTORATION: A CASE REPORT

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A 13-year-old female patient presented with discoloration of her anterior teeth. Her medical history revealed no systemic diseases or long-term medication use. The affected tooth had previously undergone root canal treatment and was restored with composite resin. Clinical examination indicated good oral hygiene with no pathological findings on the enamel or root surfaces. Radiographic assessment confirmed the absence of pathological changes, validating the success of the root canal therapy. After obtaining informed consent and discussing potential complications, the decision was made to proceed with bleaching. A rubber dam was used to isolate the teeth and protect the gingiva. The access cavity was cleaned of restorative materials and remnants up to 2–3 mm below the cervical margin. The canal orifices were sealed with conventional glass ionomer cement (Ketac Cem, 3M ESPE, Germany) to preserve the dentinal tubules and the external epithelial attachment. A 35% hydrogen peroxide solution (Opalescence Endo, Ultradent, South Jordan, UT) was placed in the pulp chamber, covered with cotton, and sealed with resin-modified glass ionomer cement (Fuji II Capsule, GC Europe, Japan). The patient was recalled after three days; as the bleaching effect was inadequate, the bleaching agent was reapplied, and the patient was scheduled for further evaluation. After achieving satisfactory whitening, the pulp chamber was cleaned, and calcium hydroxide paste was applied for one week. Subsequently, the temporary restoration was removed, the pulp chamber was irrigated with saline, and the cavity was restored with hybrid composite resin (A2 Filtek Ultimate Universal Restorative, 3M ESPE, Neuss, Germany). One year post-treatment, there were no signs of discoloration, sensitivity, or pathological changes in the gingival or apical regions, and the patient reported high satisfaction with the outcome.

Poster Presentation

PP25

A TRIMODAL AUDIT ON THE EARLY DETECTION, REFERRAL, AND TREATMENT TIMES OF IMPACTED MAXILLARY CANINES

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Aim: To assess referral practices and hospital treatment waiting times for patients with impacted maxillary canines.

Methods: Data was collected retrospectively from 100 patients who were referred to the Oral Surgery, Maxillofacial, and Orthodontic Departments at Luton & Dunstable Hospital and Bedford Hospital, UK. The data was compared to the Royal College of Surgeons of England guidelines, which recommend that patients with impacted canines should be referred by the age of 12. Referrals were also assessed for the inclusion of appropriate radiographs in patients aged 10 and over, as advised by the British Orthodontic Society Radiography Guidelines. Hospital treatment waiting times following referral for impacted canines were compared to the standard that all referred patients should be seen by an orthodontist within 18 weeks.

Results: The results suggest a significant shortfall in both current referral practices and hospital waiting times in meeting the 100% compliance standard set by clinical guidelines.

Conclusions: Improvements are needed in referral practices, particularly regarding the age of referral and the use of appropriate radiographs, to adhere to Royal College guidelines. Additionally, the time frame for patients to be seen by an orthodontist following referral was delayed beyond the standard of 18 weeks.

Poster Presentation

PP26

THE IMPACT OF THE COVID-19 PANDEMIC ON THE ORAL HYGIENE STATUS OF CHILDREN WITH HIGH CARIES RISK AND THEIR PARENTS

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Aim: This study aimed to investigate the impact of the COVID-19 pandemic on the oral hygiene behaviors and dietary habits of 3–5-year-old children with high caries risk and their parents. We hypothesized that the pandemic would negatively affect both oral hygiene and dietary habits, leading to an increase in caries risk.

Methods: A retrospective cohort design was employed, involving 155 children and their parents. Data were collected through pre- and post-pandemic questionnaires assessing oral hygiene and dietary habits, along with clinical examinations recording dmft/DMFT values. Statistical analyses, including the McNemar test for categorical variables and the Wilcoxon test for dmft/DMFT values, were conducted to evaluate differences before and after the COVID-19 pandemic.

Results: A significant decrease in parents' tooth brushing frequency was observed post-pandemic ($p=0.028$), while no significant change was detected in children's brushing habits ($p=0.216$). Both parents and children showed significantly increased consumption of sugary foods and beverages during the pandemic ($p=0.047$, $p=0.043$, respectively). The children's dmft/DMFT values significantly increased after the COVID-19 pandemic ($p=0.005$).

Conclusions: The findings suggest that while the pandemic had a limited impact on the tooth brushing habits of high-caries-risk children, it exacerbated the consumption of cariogenic foods, subsequently increasing caries risk. These results highlight the importance of continued oral health education for parents to mitigate such negative effects during future public health crises.

Poster Presentation

PP27

TREATMENT OF COMPLICATED CROWN FRACTURE IN A MAXILLARY CENTRAL INCISOR: A CASE REPORT

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This case report presents the treatment of a complicated crown fracture in the maxillary central incisor, where the fracture extended deep enough to expose the pulp. A healthy 10-year-old male patient was referred to the Pediatric Dentistry Department with a complaint of a tooth fracture following a fall. Clinical examination revealed that tooth 11 had sustained a complicated crown fracture. Radiographic examination confirmed that tooth 11 had fully matured. After administering local anesthesia, a total (cervical) pulpotomy was performed on the exposed pulp tissue. Hemostasis was achieved with physiological saline and 2.5% NaOCl. NeoMTA Plus (NuSmile Ltd, Houston, USA) was applied to the pulp tissue and covered with light-cured glass ionomer cement. Retention grooves were created in the dentin of the fractured fragment, followed by the application of 37% orthophosphoric acid for 15 seconds and a bonding agent to both the tooth and the fractured fragment. Composite resin was applied, and the fractured fragment was repositioned and photopolymerized for 20 seconds. The fracture line was then prepared with a 0.5 mm thickness and filled with composite resin. During the 19-month clinical and radiological follow-up, the patient experienced recurrent trauma. The family reported that the fractured fragment had been lost. As a result, it was decided to repair the tooth using a strip crown. No issues were noted with the tooth or periodontal tissues during follow-up appointments. This case report demonstrates that total pulpotomy with NeoMTA resulted in successful clinical and radiographic outcomes. Reattachment of the fractured fragment, followed by the application of a strip crown, effectively restored the tooth's form and function.