CASE REPORT OF A COMPLICATED CORONAL FRACTURE AND LATERAL DISLOCATION OF CENTRAL INCISORS

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Aim: dental traumas consist of accidental, minor or major events that frequently occur in children and young adults. The most common dental injuries of permanent teeth are crown fractures and dislocations.
The aim of this work is to describe the management of two central incisors that presented a complicated coronal fracture and lateral dislocation with apical dislocation after a road accident.
Methods: a young patient comes to our observation presenting: element 1.1 with complicated coronal fracture and element 2.1 with lateral dislocation with bucco-palatal inclination with subsequent buccal dislocation of the root apex and fracture of the alveolar process.
The choice of treatment complied with the guidelines of the International Association of Dental Traumatology (IADT): element 1.1 was positive to the vitality test (cryo-test), and a partial pulpotomy treatment was performed with bioactive cement (Biodentine) and permanent composite filling; element 2.1 underwent forced repositioning and splinting with passive wire for 4 weeks, followed by root canal treatment and permanent composite filling.
Results: after 12 months element 1.1 maintained its vitality and both elements are stable. After radiographic examination, there was no signs of pulp compromission.
Conclusions: the prevention of trauma complications is implemented with a therapy aimed at the recovery of the dental elements through correct diagnosis, prompt intervention and appropriate treatment and through proper follow-up.
The elements will be kept under control according to clinical and radiographic follow-ups to evaluate the success of long-term therapies.

CLINICAL APPROACH TO AVULSIVE DENTAL TRAUMA: A CASE REPORT

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Aim: aim of this case report is to record how to approach clinically an avulsive dental trauma of a superior central incisor of a 11 y.o. patient. The purpose of this analysis is to understand what kinds of risks can happen during the management of dental trauma, which requires specific operating sequence and the respect of clinical timing. This clinical case was reported and treated in the UOC of Paediatric Dentistry, Sapienza, University of Rome.
Methods: an 11 y.o. came in the UOC after an avulsive dental trauma on 1.1. The patient was just treated in the dental emergency room 2 hours after trauma. The tooth was replanted and splinted with an orthodontic flexible splint. After the execution of clinical and radiographic examinations, the endodontic treatment was done. The endodontic treatment was completed thanks to apical plug with MTA rrp (ProRoot MTA, Dentsply). A periapical state of inflammation required the execution of a $Ca(OH)^2$ medication in order to create a proper environment to complete the treatment with MTA rrp. The patient was placed on a follow-up program.
Results: the root canal filling and the restoration respected parameters of a good performance, such as shape, function and biointegration.
Conclusions: this event could be reputed as one of the most important emergencies. Knowing how to intervene drastically increases the predictability of the treatment. For that reason, it's important to better prepare the structures and the members of the staff as this type of trauma occurs quite often.

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CASE REPORT OF AN AVULSED AND REIMPLANTED CENTRAL INCISOR

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Aim: trauma involving the dento-alveolar region represent a frequent emergency in children and young adults in dentistry. Among others, one of the most serious issues is avulsion of permanent teeth, which stands for 0.5-16% of all dental injures. Nowadays the treatment of choice is represented by reimplantation of avulsed teeth but it also constitutes a major challenge in terms of long-term prognosis. The aim of this study is the clinical management of external root resorption of an avulsed and reimplanted maxillary central incisor.

Methods: a 9-year-old boy reported uncomplicated crown fracture and avulsion of tooth 11 and complicated crown fracture of tooth 21 due to trauma. Element 11 was reimplanted within 30 minutes after trauma. Three days later, both elements were diagnosed with pulpal necrosis and tooth 11 showed early external root resorption. Both teeth were endodontically treated and root canal filling was performed with apical plugs using calcium-silicate-cement that promotes deposition of mineralized tissue that inhibits the progression of resorption.

Results: at 6 months follow-up, root resorption appeared to have ceased. Clinical results 24 months after trauma were stable although signs and symptoms of ankylosis were observed.

Conclusions: in case of avulsed and reimplanted central incisor, immediate endodontic treatment and the use of calcium-silicate-cement after 24 months of follow-up appeared to inhibit the progression of root resorption.

DIAGNOSIS AND TREATMENT OF PYOGENIC GRANULOMA OF GENGIVA WITH RAPID GROWTH: A CASE REPORT

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Aim: an 8 years old male with HIV+ was visited at our Hospital because of a pedunculated gingival neoformation in correspondence with element 8.5, previously extracted, which caused discomfort while eating and bleeding. This lesion was characterized by rapid exophytic growth. Radiographically, there were no visible abnormalities and the alveolar bone in the region of the growth appeared normal.

Methods: patient was subjected to antibiotic prophylaxis. A laser-assisted excision of the lesion up to mucoperiosteum and including the edges was performed under local anesthesia. Compression hemostasis using tranexamic acid-impregnated gauze was executed. The excised tissue was sent to the Department of Oral Pathology for histological examination.

Results: the histopathological examination provided the diagnosis of pyogenic granuloma.

Differential diagnosis included Kaposi's sarcoma because of patient's HIV+.

Conclusions: pyogenic granuloma is distinguished from Kaposi's sarcoma due to the proliferation of dysplastic spindle cells, vascular clefts, extravasated erythrocytes and intracellular hyaline bodies, none of which are seen in pyogenic granuloma.

Though the term pyogenic granuloma is frequently used, it is not associated with pus and histologically it resembles angiomatous lesion rather than granulomatous lesion indicating that the term "pyogenic granuloma" is a misnomer.

MIXTURE OF TOPICAL PROBIOTICS IN THE NON-SURGICAL THERAPY OF GUM HYPERTROPHY IN A GIRL

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Aim: to report a case of gum hypertrophy in orthodontic patient treated with probiotics. Gingival hypertrophy is an inflammatory condition that often affects orthodontic pediatric patients. This condition can be favored above all by the presence of orthodontic wires and brackets on the teeth which represent local risk factors for the accumulation of plaque. Probiotics are defined as live microorganisms which, when administered in adequate doses, confer benefits on the patient's health by defending the oral cavity from a state of dysbiosis. The bacteria most commonly used as probiotics are lactobacilli and bifidobacteria.

Methods: a healthy 15-year-old patient undergoing fixed orthodontic therapy presented with an exophytic gingival lesion that has exceeded the equator of the tooth for about 2 months. Before submitting it to surgical removal it was decided to prescribe atopical probiotic therapy with *L. reuteri* and *S. salivarius*, 2 tablets a day, to be dissolved in contact with the gum, for a month.

Results: at the 15-day follow-up the lesion had reduced by more than half in volume and at 30 days it had almost completely disappeared.

Conclusions: *L. Reuteri* and *S. Salivarius* is able to induce changes in the subgingival and salivary microbiota by acting on the microorganisms involved in periodontal disease, especially on *P. intermedia* and *P. gingivalis*. The use of topical probiotics could be considered a valid alternative to surgery in cases of large gingival hypertrophy in orthodontic pediatric patients.

GOLDENHAR SYNDROME MANAEGEMENT - 2 CASE REPORTS

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Aim: to report 2 cases of multidisciplinary management of Goldenhar syndrome.

Introduction: oculo-auricolo-vertebral spectrum (OAVS) also known as Goldenhar syndrome is a rare congenital defect, that involves structures arising from the first and second branchial arches.

Anomalies include facial asymmetry, epibulbar dermoid or lipodermoid, zygomatic and/or maxillary hypoplasias, microfacial hemisomia, microtia and ear abnormalities, vertebral defects and cranio- facial deformities. Dental defects include delayed tooth development, agenesis of premolars and molars, enemal and dentin malformations.

Methods: a 10 year old boy, presenting OAVS, exhibites facial asymmetry, microfacial hemisomia, Angle class II malocclusion, multiple agenesis in upper and lower maxilla. An orthodontic therapy and an oral mucosa evaluation has planned to achieve a correct fonatory and chewing function. A 7 year old boy presented facial asymmetry, ear malformations, zygomatic process agenesis, jaw hypoplasia and jaw ramus agenesis. After maxillofacial surgery with bone graft from the VI e VII toracic rib, the scapula and the clavicle to recreate the conformation of the jaw ramus and zygomatic bone, a palatal plate (orthodontic removable system) had been used to guide mandibular growth, correct occlusion, reduce facial asymmetry and change tongue interposition.

Results: chewing and phonatory function was restored in these patients.

Conclusions: the interaction between the Pediatric Dentist and the other medical figures has proved to be a winning strategy in the management of these cases.

NATAL TOOTH IN A 7-DAY-OLD BABY: MANAGEMENT AND FEASIBLE LINK TO SYNDROMIC PICTURES

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Aim: to recognize syndromic pictures at early times.

Methods: a 7-day-old twin patient came to us from the Neonatology Department of Cagliari University Hospital for a white hard mass on the anterior inferior alveolar ridge. His brother showed no oral alterations. At objective exam we detected a small tooth, which had not created traumas on the soft tissues yet, and a thick white lesion on the lingual dorsum. To allow the baby to feed properly, a tooth extraction was scheduled.

Results: 1st week and 1st month follow up showed excellent tissue healing.

The white patina revealed removable; it was utterly removed with a gauze during the extraction and a diagnosis of localized mycotic infection was given, so the baby underwent topical antifungal therapy. Natal teeth are dental elements present at the time of birth, especially in the antero-inferior region (85%). They may lead to problems such as insufficient feeding, injury to the mother and development of traumatic ulcers. Management often involves early extraction. Syndromic pictures are associated with natal teeth: Riga-Fede Disease, Van der Woude Syndrome and Congenital Pachyonichia (CP) are some examples. CP embraces a group of autosomal dominantly inherited conditions showing signs of thickening like palmoplantar and follicular keratosis and oral leukokeratoses in the lingual dorsum.

Conclusions: due to the former considerations, we considered as differential diagnosis an initial CP picture in our patient. Currently there are no elements making us suspect a syndromic picture. The baby is still under control.

TELEDENTISTRY DIAGNOSIS IN PEDIATRIC ORAL PATHOLOGY: A CASE REPORT

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Aim: during the COVID-19 pandemic, the majority of dental visits or treatments were postponed. Many patients with non-urgent oral problems had to resort to teleconsultations with their dentists by sending images, thus providing an opportunity to evaluate problems and giving patients the ability to self-manage minor oral issues. This approach is called "teledentistry" a method already validated in literature. The aim of this study is to demonstrate how it was possible to diagnose and monitor an unconventional oral candidiasis case in a 9-year-old child using this method.

Methods: the patient's mother contacted the pediatric dentist via WhatsApp, sending photos and videos of the child's mouth and tongue and reporting the child's condition. Based on these elements, some possible diagnostic hypotheses were formulated but none completely fitted. An "observation" and "wait-and-see" approach was adopted for a few days, using online video telemedicine technology and messaging with a smart device.

Results: observing the evolution of the lesion allowed the diagnosis of oral candidiasis, a common superficial mycosis in the oral cavity. In children, the most common type is pseudomembranous candidiasis, characterized by white or yellow-white patches that can be removed. Topical therapy with miconazole nitrate, which was prescribed, was very effective for oropharyngeal candidiasis.

Conclusions: during the COVID-19 pandemic, teledentistry was essential for access to dental care and will be an important resource in the medical field also in the future.

ORAL MANIFESTATIONS IN KOOLEN DE VRIES SYNDROME: A CASE REPORT

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Aim: Koolen de Vries syndrome (KdVS) is a rare multisystem disease caused by genetic changes that eliminate the function of one copy of the KANSL1 gene in each cell. Affected individuals exhibit developmental delay, mild to moderate intellectual disability, congenital malformations and behavioural features. In the present case report, the case of a child with KdVS is presented.

Methods: X.V., a 4-year-old boy affected by KdVS, came to the Dental Clinic of San Paolo Hospital in Milan for a first dental examination. The patient has also epilepsy, severe cognitive delay and speech disorder.

Results: on extraoral examination, X.V. presents facial features typical of patients with the syndrome, such as eyelid ptosis, prominent ears, high and elongated forehead, descending labial cleft, epicantal folds and pear-shaped nose with bulbous nasal tip. The presence of mouth-breathing is also noted. On intraoral examination, the patient shows microdontia, increased overjet due to prolonged pacifier sucking, continuous until 3 years of age and then occasional until the time of the visit. Oral hygiene is inadequate with tartar accumulation, especially on the lower incisors. The treatment plan included oral hygiene instruction, calculus removal and a pacifier replacement device to break the sucking habit.

Conclusions: patients with rare syndromes should be included in a program of regular dental check-ups and preventive strategies to maintain oral health and intercept oral problems early.

MODERN DENTISTRY BETWEEN ADVANCED TECHNOLOGIES AND HUMANIZATION: CARIES MANAGEMENT

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Aim: modern dentistry is nowadays gaining ground even in the pediatric field, as it is associated with a more comfortable patient experience. The aim of the present study is to present a case managed with digital technologies.

Methods: L.M., dental phobic patient (12aa) complaining pain of left lower arch reported previous failed treatment attempts: Frankl's Behavioral Scale (FBS) score 2 at visit. After gaining his confidence through behavioural approach techniques, oral examination revealed a carious lesion in the left lower first molar.

To overcome the patient's dental fear, the following treatment plan was proposed: conscious sedation with nitrous oxide (digital machine), electronic anaesthesia, caries removal with Erbium laser, and composite restoration.

Results: computerized infiltration of anaesthesia, allowing the analgesic fluid to be adjusted and ensuring a constant low pressure over time, controlled the pain related to ignition. The Erbium laser, safe and effective for caries removal, allowed the cavity preparation in line with minimally invasive dentistry requirements due to its low depth of tissue penetration and ability to decontaminate infected dentin.

Conclusions: L.M.'s cooperation during the procedure achieved score 4 (FBS). The boy, relaxed and incredulous, requested intraoperative images that could demonstrate the infiltration of anaesthesia. The lack of vibration and the different noise produced by the Erbium laser made it more acceptable than rotary instruments. This case demonstrates that modern dentistry can offer paediatric patients with dental fear new treatment options.

MEDIAN RHOMBOID GLOSSITIS: A CASE REPORT

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Aim: median rhomboid glossitis is a condition caused by the overgrowth of Candida spp. that can occur due to a weakened immune system, the use of antibiotics or other factors that alter the balance of the ecosystem of the mouth. In children, it can cause discomfort or burning sensation in the affected area, resulting in difficulty eating or speaking. The purpose of this study is to facilitate early diagnosis of this condition by presenting a clinical case.

Methods: the 4-year-old girl arrived for an oral examination at the Conscious Sedation Department of the Milan Polyclinic. During the examination, a medial lesion was observed on the dorsal surface of the tongue. The patient was referred to an oral pathology specialist.

Results: the median lesion on the tongue, approximately 12 mm in size, was not painful to the touch and was compatible with median rhomboid glossitis. Treatment with topical miconazole (Daktarin 2%, Gmm Farma srl, Segrate, MI, two applications per day) was prescribed and a follow-up appointment was scheduled at 10 days.

At the follow-up appointment, the lesion was found to be healed and the patient reported no more symptoms, being able to eat and talk without discomfort. The drug treatment was well tolerated.

Conclusions: early detection of the lesion allows effective and timely treatment, sparing the young patient a prolonged period of discomfort and difficulty in normal activities.

AN INNOVATIVE APPROACH TO RESTORE PRIMARY TEETH: A CASE REPORT

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Aim: the purpose of this clinical case is to present an innovative technique to restore deciduous teeth with customized prosthetic crowns and minimal invasiveness.

Methods: a female patient of 9.6 years old in good general health presented to our clinic with carious processes affecting elements 6.4 and 6.5. Photographic and X-ray records and an intra-oral digital impression with the iTero Element™ Flex scanner were acquired during the first session. The scan was sent to the laboratory with the prescription and indications to make the customized prosthetic crowns in 600 MPa zirconia of the affected elements. In the second appointment was performed a minimal tooth preparation and the crowns were fixed with a dual composite-based and self-curing cement (Bifix® SE VOCO). Subsequently a follow-up X-ray was performed.

Results: the procedure allowed the restoration of deciduous elements through customized prosthetic crowns to be applied immediately after a minimal preparation of the same. The crowns presented correct dimensions, a good marginal adaptation and an adequate colour.

Conclusions: the technique proved to be a valid procedure to rehabilitate deciduous caries-affected teeth with customized prosthetic crowns through a digital workflow. It made possible to overcome the disadvantages of the conventional technique both in terms of operational time savings and comfort for young patients improving their compliance and maintaining at the same time the clinical advantages of other procedures.

EVALUATION OF OSA RISKS AND MALOCCLUSIONS IN A PATIENT WITH CANTU SYNDROME

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Aim: Cantu syndrome is a rare syndrome, with less than 30 cases described in the world, characterized by congenital hypertrichosis, osteochondrodysplasia, cardiomegaly and dysmorphism. The purpose of the present study is to assess the risk of OSA and malocclusions in a pediatric patient with Cantu syndrome.

Methods: a 12-year-old boy with Cantu syndrome, aged 12 years, was referred to the Pediatric dentistry department at the A. Gemelli Hospital for a complete dental evaluation. Caregivers were asked to complete the Italian version of the Pediatric Sleep Questionnaire (PSQ) in order to assess the risk of suffering from OSA.

Results: based on PSQ result, the patient did not present a significant risk of suffering from OSA.

From the orthodontic evaluation the patient presented dento-skeletal biprotrusion, dental molar and canine class III relationship on the right, dental molar and canine class I relationship on the left, mismatched midface and dental lines, anterior openbite and negative overjet. Atypical swallowing was also noted.

Conclusions: the case patient with Cantu syndrome is affected by dento-skeletal malocclusions, but has a low risk of OSA.

INFLUENCE OF FRENOTOMY ON BREASTFEEDING IN NEWBORNS WITH ANKYLOGLOSSIA AND ON MOTHERS' QOL

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Aim: ankyloglossia, resulting in restricted tongue movement, is a cause of breastfeeding difficulties and nipple pain in mothers. The literature is controversial regarding frenotomy. This study aims to evaluate the efficacy of frenotomy in facilitating breastfeeding, reducing maternal discomfort and maternal quality of life (QoL).

Methods: the study was conducted on 30 infants (19 M, 11 F) at the Maggiore Hospital in Bologna, Italy. 3 phases were planned for each patient: diagnosis, intervention and re-evaluation. In the diagnostic phase the 30 infants with class III, IV or V ankyloglossia were examined, a questionnaire assessing symptoms and sucking, swallowing and breathing coordination during breastfeeding and QoL was completed by the mothers. Pediatricians monitored infant weight and midwives assessed breastfeeding.

Frenotomy was performed in the intervention. At reassessment, 1 month after the intervention, mothers completed a second questionnaire to assess the benefits of frenotomy in terms of QoL compared with the pre-treatment period.

Results: at reevaluation there was significant improvement in all symptoms in both child and mother and in QoL, with increased growth in the infant.

Conclusions: frenotomy improves breastfeeding in infants with ankyloglossia, gives benefits on common lactation-related infections, dermatologic conditions and engorgement for mothers, reducing short-term pain.

ORAL HEALTH STATUS OF CHILDHOOD CANCER SURVIVORS AFTER ANTINEOPLASTIC THERAPY

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Aim: the aim of this cross-sectional study was to assess the prevalence and severity of dental alterations according to age at cancer treatment using the Modified Dental Defect Index (MDDI) and to explore the association between MDDI scores and caries experience in Italian childhood cancer survivors (CCS).

Methods: 93 CCSs patients sent to the Pediatric Dentistry Section of Dental School for routine checks were recruited from March 2019 to December 2022. All patients were treated with chemotherapy and/or radiotherapy and were in remission from at least 2 years. All participants were examined by a single operator for dental caries and enamel defects in the permanent dentition according to the decayed-missing-filled teeth (DMFT) index and the Aine rating scale. Dental abnormalities were diagnosed using panoramic radiographs and graded for severity according to MDDI. The MDDI values were categorized as normal (MDDI = 0), moderately abnormal (1 ≤ MDDI <16), and severely abnormal (MDDI ≥16).

Results: none of the enrolled children had normal MDDI score. MDDI and DMFT values were higher in CCSs submitted to cancer treatment before 5 years of age (54/93). A significant positive correlation emerged between DMFT and MDDI values (*p* <0.001). CCSs with moderately abnormal disturbances had statistically significant lower DMFT scores (*p* <0.001) than those with severe dental abnormalities.

Conclusions: these findings suggest that children in remission from malignant diseases with MDDI values ≥16 are at higher risk for poor dental health and should be strictly monitored by dental specialists.

CLEFT LIP-PALATE CHILDREN AND PARENTS PERCEPTIONS OF ORAL HEALTH-RELATED QUALITY OF LIFE

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Aim: the aim of this cross-sectional study was to investigate and compare the perception of Oral Health-Related Quality of Life (OHRQoL) of patients affected by cleft lip, with or without palate (CL±P), and their parents using the Child Oral Health Impact Profile (COHIP).

Methods: non-syndromic CL±P patients aged 8-14 years and their parents referred to Section of Pediatric Dentistry at University of Turin from December 2019 to March 2022 were recruited for this study. All patients and parents were asked to answer the COHIP questionnaire which includes oral symptoms, functional well-being, emotional well-being, school environment, and peer interaction referring to positive or negative children's experiences in the last 3 months. Age, gender, ethnicity, type and side of the cleft and parents' country of origin were noted and a statistical analysis were carried out.

Results: fifty-three CL±P children and their parents filled in the COHIP questionnaire: concordance between their reports was low to moderate.

Parents reported worst scores in the peer interaction (p = 0.033) and functional well-being domains (p = 0.005) and they overestimated the impact of unilateral (p = 0.047) and bilateral CL±P (p = 0.021) on OHRQoL than they children did.

Foreign parents were more bothered about peer interaction (p = 0.010) and school environment (p = 0.012) dimensions while Italian parents about the functional well-being of their children (p = 0.014).

Conclusions: according to our study results, parents cannot replace children in assessing their OHRQoL but can provide relevant complementary information.

DENTAL TRAUMATOLOGY IN CHILDREN: THE EXPERIENCE OF UNIVERSITY/HOSPITAL POLICLINICO OF BARI

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Aim: traumatic dental injuries are very frequent during childhood and adolescence (2 out of 3 children have suffered a dental trauma before adulthood). The aim of this study was to evaluate the traumatic dental trauma data in patients referred over a 2-year (2021-2022) period to the University of Bari (School of Dentistry, Clinics of Pedodontics) and compare with records emerging from international literature.

Methods: the study was based on the clinical data of 70 patients enrolled in our hospital in the period 2021-2022. Examining children by the same investigator the following information was recorded: age, gender, etiology, localization, place, number of injured teeth, type of trauma and treatment received.

Results: a total of 70 patients presented a total of 129 traumatized teeth (71 permanent and 58 primary). 45 boys (64%) and 25 girls (36%) with an age between 1 and 20 years participated in the study. The most common type of dental trauma recorded was luxation in primary teeth (40%), uncomplicated crown fractures in permanent (55%). The main causes were falls at home. The most frequent treatment was examination and relocation in primary (60%) and conservative treatment in permanent (37%) accordingly to the general guidelines reported in literature.

Conclusions: our results are similar to the data in literature. Sensitize dentists to develop greater attention to interceptive dental trauma in children appears fundamental. This is possible thanks to the correct information of parents and teachers, correcting the predisposing factors and preventing post-trauma complications.

THE TREATMENT OF THE NECROTIC IMMATURE TOOTH: PAST *VS* FUTURE. A LITERATURE REVIEW

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Aim: immature necrotic permanent tooth represents a challenge for clinicians. The etiopathogenesis of pulp necrosis can include: caries, trauma and dental anomalies. For their resolution, several therapeutic approaches have been employed: apexification with calcium hydroxide, apical plug with MTA and regenarative endodontic procedures. This literature review aimed to assess whether endodontic regeneration approach is an avalaible method in resolving this lesion.

Methods: a comprehensive search was carried out on electronic databases, including Pubmed, Google Scholar, Scopus, Web of Science and Cochrane. The following terms were searched individually and combined together: “Regenerative endodontic protocols”, “Immature teeth”, “Pulp necrosis”. Only studies published between 2014 and 2022. A total of 9 articles were included in the review.

Results: the studies analyzed have shown that true regeneration is not achieved with current protocols. The apexification and endodontic revascularization procedures have a comparable percentage of clinical success. The REG approach favors the root elongation and thickening of the dentin walls.

Conclusions: among all the techniques analyzed, pulp revascularitation is a promised technique thanks to its relative easiness of execution and the possibility of re-intervention in case of failure. The evidence for clinical recommendation of the regenerative approach is not strong, thus, further RCT studies with long-term follow-up should be conducted.

OSAS AND BRUXISM IN PEDIATRIC PATIENTS: FOCUS ON DIAGNOSIS AND QUALITY OF LIFE

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Aim: this narrative review aimed to evaluate the correlation between obstructive sleep apnea syndrome (OSAS) and sleep bruxism (SB) in pediatric patients, focusing on diagnosis and quality of life (qol).

Methods: a research was carried out on electronic databases, such as: Pubmed, Scopus, Web of Science, Google Scholar and Cochrane. The following "mesh terms" were searched individually and combined together: "Pediatric Bruxism", "Pediatric OSAS", "Sleep bruxism and OSAS in Children". This scientific search engines produced 47 results. Only 19, published from 2000 to April 2022, were included.

Results: 19 full-text articles were included in this narrative review. The presence of both OSAS and SB ranged in the sample analysed from 11.03% to 26.1%. The articles evaluated showed how an accurate clinical examination was the first step to perform a correct diagnosis, but it was insufficient. The patients' evaluations should include: tonsillar grading, evaluation of dento-skeletal discrepancies, cephalometric analysis etc. The polysomnography was the gold standard for diagnosis and severity assessment. OSAS and SB could cause short-term and long-term pathological consequences, impairing considerably the qol of the patients.

Conclusions: obstructive sleep apnea associated to bruxism in pediatric patient is a topic still debated, that needs further studies. The management of the two pathological disorders is multidisciplinary, and depends on etiology assessment. A correct approach to these associated diseases leads to prevent the complications involving the physical and intellectual children development.

MESIODENS: MINIMALLY INVASIVE MANAGEMENT OF A PEDIATRIC PATIENT

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Aim: mesiodens is a supernumerary tooth which occurs more often in the midline between the maxillary central incisors, as single, multiple, unilateral or bilateral and its morphology varies from conical or peg-shaped, to tuberculate or supplemental. The prevalence of mesiodens varies between 0.3% and 0.8% in deciduous dentition and 0.1% and 3.8% in permanent dentition, in a 2:1 gender ratio. Since mesiodens is more frequent in pediatric age, it is necessary to perform a minimally invasive approach, in order to limit dental fear anxiety and dental behaviour management problems, that most commonly occur in this age range. Aim of the present study is to provide a minimally invasive approach for the management of mesiodens in pediatric dentistry.

Methods: in a 9 year-old female, after the clinical examination, an instrumental examination was carried out, availing of Cone Beam Computed Tomography (CBCT). A minimally invasive surgical approach for both mesiodens was performed under local anesthesia and a full-thickness marginal vestibular flap has been set up. The surgical intervention has been conducted by the use of magnifying sistems, operating microscope and piezo-surgery.

Results: the clinical examination revealed a cone-shaped mesiodens on the palatal side of the upper central incisors. By CBCT a second supernumerary conic-shape tooth was revealed in the upper jaw. The minimally-invasive surgical approach allowed the use of a less amount of anesthetic, good bleeding control and hemostasis, less swelling, less tension of the wound margins and no evidence of wound infections. After a 3 months follow-up the surgical site showed good healing and the adjacent teeth responded positively to the vitality tests.

Conclusions: the minimally invasive approach in mesiodens represents a promising scenario in pediatric dentistry, trough which it is possible to achieve good healing and less intra and post operative complications. In addition, modern technologies such as piezo-sugery may improve the effectiveness of pediatric subjects' compliance, reducing dental fear anxiety or dental behaviour management problems. Further and wider studies may highlight the potential of a minimally invasive management for mesiodens in pediatric dentistry.

ECC AND BREASTFEEDING: A WORLDWIDE OVERVIEW

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Aim: to synthesise the current evidence for the association between prolonged breastfeeding and earlychildhood caries (ECC), taking a worldwide overview on different studies.

Methods: systematic review, meta-analyses and narrative synthesis on main scientific databases.

Results: the available scientific evidence showed that there is a correlation between breastfeeding and ECC, particularly when oral hygiene is not a common preventive measure. Moreover, frequency of feeding influenced the prevalence of ECC, also considering the number of nighttime feeding sessions.

Conclusions: extended breastfeeding is a protective factor for childhood caries under 1 year of age. By contrast, breastfeeding from 12 months onwards, in association with nighttime feeding and cosleeping, is considered a risk factor for ECC.

ORTHODONTIC BANDS IN MOLARS AFFECTED BY MIH FOR THE PREVENTION OF POST-ERUPTIVE BREAKDOWN

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Aim: this retrospective cohort study assessed the efficacy of orthodontic bands luted with glass-ionomer cement (GIC) in the prevention of dental caries and post-eruptive enamel breakdown (PEB) in first permanent molars (FPMs) affected by Molar-Incisor Hypomineralization (MIH) with extensive yellow-brown defects.

Methods: we retrospectively analyzed, as study group, dental records of children who received this preventive restauration on 22 FPMs free from caries and dentin breakdown (DB). Control group consisted of 22 FPMs with similar defects treated only with mineralization protocols. Primary outcome was “no need for restoration” due to dental caries or DB. Secondary outcomes were enamel breakdown (EB) prevention and plaque index (PI) reduction. Kaplan-Meier method was used to calculate 6-month, 1-year and 18-month survival probabilities.

Results: cumulative survival rates for study and control group were 100% *vs* 94% (S.E: 0.032) at 6-month follow-up and 98% (S.E: 0.022) *vs* 73% (S.E: 0.075) between 6- and 18-month follow-up. The difference between groups was significant (Log Rank test; $p < 0.001$). EB frequency was significantly higher in control group during each observation period. Study group showed a significant reduction in PI from baseline (p: 0.010; Friedman test).

Conclusions: luting orthodontic bands with GIC can be an effective approach in preventing dental caries and PEB in FPMs affected by extensive MIH defects. This preventive measure should be implemented during the early stages of eruption to maintain teeth in oral cavity and avoid complex restorative.

DENTAL TRAUMA IN CHILDREN WITH AUTISTIC DISORDER: A RETROSPECTIVE STUDY

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Aim: autism is a severe development disability characterized by impaired reciprocal social interactions, communication skills, and repetitive behavior patterns. The research article aims to estimate the oral status of autistic children, comparing it with non-autism patients.

Methods: a retrospective study was done that reviewed the oral health status of 70 patients, 35 autistic children and 35 patients without the autistic spectrum (≤15 years of age). Dental trauma type, periodontal tissue injuries, soft tissue lip injuries, different treatments carried out, associated soft tissue findings and disorders, and the long-term management were regarded as terms. All patients were selected consecutively.

Results: the enamel fracture was the most highly represented in both groups, followed by enamel/dentin/pulp fracture, root fracture, and avulsions in the autistic group, and by avulsions, root fracture, and enamel/dentin/pulp fracture in the non-autism patients. The comparison showed a statically significant difference ($P < 0.012$).

Conclusions: a more focused screening and precautionary interventions (e.g., reducing the increased overjet) should be done to prevent dental trauma. The most common treatment carried out was the composite restorative technique, and the long-term approach was managed through root canal therapy in the control group and through root canal therapy and extraction in the sample group.

CONSCIOUS INHALATION SEDATION WITH N_2O/O_2 IN CHILDREN: A RETROSPECTIVE STUDY

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Aim: demonstrate the efficacy of N_2O/O_2 in reducing anxiety and increasing children's cooperation during pedodontic treatment.

Methods: 371 children aged 4 to 10 years were enrolled. Two appointments were established for each one: the first cognitive of the environment and procedure, the second for conservative treatment on deciduous with the aid of the dam and administration of N_2O/O_2 for a maximum of 30 minutes.

At first, it was administered 100% O_2 and N_2O gradually increasing the concentration by 10% every two minutes up to 35%.

At the end of the treatment, 100% O_2 was administered for 5minutes. The child's comfort and cooperation were assessed with reference to the Venham Scale before treatment(t_0) at the end of induction (t_1) mand during the procedure (t_2).

Results: in older children, cooperation increased significantly from t_0 to t_1 and t_2, while in younger children, lower levels of cooperation were obtained at t_0. None of the children lost consciousness, over 97% reported no side effects, while the remaining 2.7% reported transient effects. No difference was also found between females and males, while there is significant difference between the two age groups in relation to Venham score.

Conclusions: N_2O/O_2 administration has been shown to reduce anxiety and pain in children by promoting excellent compliance. However, subjects with severe anxiety, who resisted administration due to uncooperative behavior, were identified, defining the need for further studies on randomized control groups.

EVALUATION OF RELATIONSHIP BETWEEN ODONTOPHOBIA AND PAIN EXPERIENCE IN PEDIATRIC PATIENTS

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Aim: dental fear or anxiety (DFA) is a normal emotional reaction to some specific stimulations in dentistry, experienced as threatening. When it becomes excessive to the real threat hindering the performance of regular activities, it could lead to dental phobia (DP). Pediatric patients are more inclined to DP, as dentists it is important to establish a relationship of mutual trust that can calm the state of anxiety and fear in the child, preventing the latter from becoming a phobic adult.
The aim of this study is to investigate the correlation between odontophobia and odontalgia, to realize how much pain affects the development of DFA and therefore how much, a careful dental prevention program, can avoid the risk of onset fear of the dentist.

Methods: 84 patients of the Pediatric Dentistry Service of UOC the Dentistry and Odontostomatology AOU "G. Martino" Messina in October-March 2022/23 were examined. Each patient was given the following self-assessment psychometric tests: CFSS-DS, MCDAS and VAS.

Results: the average scores achieved are all lower than the limit values considered: 30.28, 17.25, 17.5. The relationship between odontalgia and odontophobia varies significantly between tests, with a higher correlation for the VAS scale (2:1) followed by the MCDAS test (3:1) and the CFSS-DS (5:1).

Conclusions: despite the high number of patients with odontalgia tested, the three psychometric scales used revealed a low percentage of odontophobic patients.

CONSERVATIVE TREATMENT OF CONDYLAR FRACTURE IN PAEDIATRIC PATIENTS: A CASE REPORT

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Aim: maxillofacial trauma seldom affects children under the age of 5, and because of the potential for adverse effects on mandibular growth and dentition development, these patients require different treatment modalities than adults. In this case report, a condylar fracture in a 3-year-old kid was treated conservatively using functional device.

Methods: a 3-year-old boy, following an accidental fall, presented mandibular fractures on CT scan: on the right there was a compound paramedian symphyseal fracture, and on the left, there was a decomposed condylar fracture with condylar neck raised and the head displaced inferomedially. The dysfunction resulting included an initial buccal opening of 2.4 mm and laterodeviation to the left. Given the patient's age, a conservative approach was preferred. Bite raisers were applied to repeat the median and resolve the dysfunction. Following their removal, an AMCOP preformed appliance was provided to stabilize the outcome and enhance masticatory function. It was worn every night and for an hour during the day. Follow-up was performed monthly.

Results: the dysfunction was corrected, and the final buccal opening was 4.8 mm after 1 year of functional treatment. The choice of the preformed appliance was motivated by impossibility of taking an impression due to his small buccal opening.

Conclusions: condylar fractures in children may have major consequences such as ankylosis, mandibular development restriction, and temporomandibular dysfunction. To restore optimal function and encourage condylar remodeling, treatment must be timely and appropriate.

CRANIO-FACIAL FEATURES IN A PATIENT WITH PIERRE ROBIN SEQUENCE. A CASE REPORT

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Aim: Pierre Robin sequence is characterized by micrognathia, glossoptosis with consequent airway obstruction, and cleft palate. The purpose of this work is to describe the cranio-facial features of a child with Pierre Robin sequence.

Methods: an 11-year-old patient afferred to Dentistry Department of the Policlinico of Bari. The patient had been diagnosed at birth with Pierre Robin sequence since he presented a micro-retrognathia, cleft palate and respiratory failure. Genetic analysis detected a partial duplication of chromosome 13 long arm. He underwent palatoplasty surgery in 2013. An anamnestic questionnaire and intra- and extra-oral assessment were performed and OPG X-ray and latero-lateral cephalogram were requested.

Results: clinical examination showed motor, cognitive and speech delay and breathing disorders. Extraoral *inspection* revealed oral respiration, atypical swallowing, labial incompetence, reduced height of the lower third of face and convex profile. Intraoral analysis revealed atypical swallowing, transversal contraction of both arches, V-shaped upper arch, increased overjet. Agenesis of 45 and 55 was observed at OPG. Cephalometric analysis showed skeletal class II, small mandibular size and hyperdivergent growth pattern.

Conclusions: patients with Pierre Robin sequence have cranio-facial abnormalities with aesthetic and functional implications and require careful treatment planning.

ORTHODONTICS CHARACTERISTICS IN A PATIENT WITH NOONAN SYNDROME: A CASE REPORT

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Aim: Noonan Syndrome is a rare autosomal dominant disorder of the disease group generally known as RASopathies as associated to the RAS gene mutation. Patients affected may present a highly variable phenotypic expression, that additionally changes with age. The most common diseases associated to NS are pulmonic stenosis, cryptorchidism, cognitive and language delay, bleeding tendency, although the main clinical signs are orthopedic and orthodontic dysmorphisms. People with NS are characterized by hypertelorism, jutting eyes, descendent eyelid, depressed root of the nose, cavities, periodontal lesions and odontogenic keratocysts.

Methods: we described a case referred to our observation in 2022; the patient was a 12 y.o. and presented multiple diseases in different organs, systems and specific orthodontic characteristics.

Results: patient showed sensorineural hearing loss, III grade chronic kidney disease and bicuspid aortic valve; as for the orthodontic characteristics, the patient presented a flattened cranium, classified as brachycephal cranium, and cephalometric analyses highlight an ANB >5°, a SNA >83° and a SNB <78°; also, maxillary protrusion and mandibular retrusion, that classify the maxillary-mandibular relationship as Angle II class, and the upper-lower incisor relationship as open-bite with overbite reduction.

Conclusions: NS patients generally need of a multidisciplinary approach and treatment for systemic diseases, while for the orthodontics problems a first phase of functional treatment, also using the patient's residual growth, and a second phase with braces is generally recommended.

GUM HYPERTROPHY IN AN ORTHODONTIC PATIENT TREATED WITH TOPICAL PROBIOTICS *L. REUTERI*

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Aim: the aim of this work is to document a case of gum hypertrophy in an adolescent patient in fixed orthodontic therapy successfully treated with the use of topical *L. reuteri.*

Methods: a 13-year-old female patient in good systemic health, wearing a fixed appliance with brackets, presented with gingival inflammation, edema and bleeding. Conventional etiological therapy associated with antibacterial mouthwashes had not improved the clinical picture. Treatment with topical *L. reuteri* probiotics was therefore evaluated. At t_0, after recording the clinical periodontal parameters, instructions were given for accurate oral hygiene (OH) standards and after deplaquing, the probiotics *L. reuteri* DSM 17938 ATCC PTA 5289 was applied in suspension on the gum hypertrophy and left to act for 5 minutes. *L. reuteri* in cpr 2 vv/day was prescribed for 4 weeks. The tablets had to be dissolved in the oral cavity after OH, avoiding drinking, eating or rinsing the mouth for the next 60 minutes. In the second, third and fourth sessions, scheduled for one (T1), two (T2) and four (T3) weeks, the periodontal clinical parameters were re-evaluated.

Results: Gum hypertrophy at the four-week follow-up was 90% regressed. Baseline, Full Mouth Plaque Score (FMPS) was 89%, four weeks later it was 3%, and bleeding on probing (BOP) from 32% decreased to 2% at one month.

Conclusions: The treatment of gum hypertrophy in orthodontic patient, with topical probiotics, was found to be effective safe and without side effects. Studies with a larger sample size and more follow-up are needed to confirm this finding.

A SIMPLE SOLUTION TO SOLVE A COMPLEX PROBLEM

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Aim: the rapid palate expander (RPE) is a widely used orthodontic device, extremely versatile and easy to use. This case report shows a retained upper right canine, resolved thanks to the extraction of the corresponding primary tooth and the use of a RPE.

Methods: the patient is a 9.7 years old female in mixed dentition, second class II division, cervical stage 1 according to Franchi e Baccetti with a retained 1.3. Initial extra and intra-oral photographs, orthopantomography of the dental arches, teleradiography of the skull in latero-lateral projection and cone beam CT with reduced field of view (FOV) were performed.

The angle formed by the long axis of the retained canine with the medial line was measured on the panoramic: this value was found to be 64°. A RPE cemented on the sixths was used. The deciduous teeth 53 and 63 were extracted. The design of the device consisted of palatal arms forward up to the deciduals fifths and a vestibular arm equipped with an eyelet ready to act as a point of support for the disinclusion of 13, in case of eruptive failure.

Results: fortunately, the vestibular arm was useless since 1.3 showed improvements in position and eruption pattern 1 year after the cementation of the RPE, as documented by the final intraoral x-ray.

Conclusions: this interceptive intervention made it possible to simplify the orthodontic case which, otherwise, would have found a favorable substrate for evolution into inclusion, ectopia or transposition, including the risks associated with much more complex therapies, such as ankylosis and root resorption.

USE OF MINISCREWS AS ORTHODONTIC ANCORAGE: A CASE REPORT

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Aim: miniscrews represent an intraoral but extradental skeletal anchorage and required less patient compliance. The purpose of this study is to present a case of correction of a Class III malocclusion using miniscrews as a skeletal anchorage.

Methods: we present a 10-year-old girl in dynamic growth phase, skeletal class III, high angle malocclusion with retracted premaxilla, transversely contracted upper jaw, molar and premolar mesialization, negative overjet, at the end of permanent teeth eruption except for second molars but with retained upper canines for lack of space for eruption, crossbite of incisors.
Examinations performed: facial and intraoral photographs, orthopantomography, teleradiography in postero-anterior and latero-lateral projection, cephalometric tracings and maxillary cone beam.
The treatment plan included the application of an orthodontic device for hybrid palatal expansion, anchored on 2 paramedian palatal miniscrews and dental support for custom bands, nickel titanium springs for detachment of first molars, class III orthopedic elastic bands with anterior hooks, and Delaire mask.

Results: after 1 year and 10 months from the start of treatment, palatal augmentation in transverse diameters and modification of the negative overjet to positive values was obtained. Space for correct positioning of the upper canines was obtained. Vertical plane correction still needs to be improved.

Conclusions: the improvement of malocclusion by the use of miniscrews can be considered a viable alternative to traditional orthodontic appliances.

MARSUPIALIZATION OF A DENTIGEROUS CYST AND SUBSEQUENT DENTAL ERUPTION: A CASE REPORT

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Aim: dentigerous cyst is the second most common cyst in the jaws. Almost all dentigerous cysts enclose the crown of a tooth, and the radiolucent area is attached to the tooth at the cementoenamel junction. It occurs due to the accumulation of fluid between the crown and the follicular epithelium. Management of dentigerous cysts is by enucleation of the cyst and removal of the associated unerupted tooth. If the path to eruption is favorable, the tooth may be left in place. Large cysts with extensive destruction of the mandible are managed by marsupialization.

Methods: an 8-year-old boy shows on oral inspection agenesis of 3.5, motility of 3.4, caries of 7.5, 3.3 and unerupted 3.4. Radiographic examination identified a large mandibular cyst involving unerupted 3.3 and 3.4. Swelling but no pain was present. Surgical treatment was performed with tooth extraction of 7.4 and 7.5, decompression with opening of the cyst cavity and removal of the cyst roof for histological analysis, and marsupialization with placement of a drainage in the region of 7.5 that protruded into the cyst cavity and was anchored externally to the gingival mucosa.

Results: two months after surgery, drainage removal was performed. The rearrangement of the bone was visible on radiograph with partial eruption of 3.4. Six months after surgery, coronal eruption of 3.4 and partial eruption of 3.3 was visible on oral inspection.

Conclusions: marsupialization of a large mandibular cyst allowed recovery of two permanent teeth in a pediatric patient.

COMPOUND ODONTOMA ASSOCIATED WITH IMPACTED CANINE IN A PEDIATRIC PATIENT: A CASE REPORT

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Aim: odontomas are considered hamartomas or tumor-like malformations composed of dental hard and soft tissues. They are generally asymptomatic, often associated with delayed exfoliation of primary teeth, delayed eruption, or impaction of permanent teeth. The aim of this study was to describe the surgical treatment of a compound odontoma, associated with retention of 4.3 and persistence on the dental arch of 8.3 in a pediatric patient.

Methods: a 13-year-old girl presented at the Pediatric Dentistry Department of the University Hospital, "Federico II", Naples, Italy, for routine dental care. An orthopanoramic examination revealed the presence of a compound odontoma, impeding the eruption of 4.3. The cone beam CT provided more information about the localization in the parasymphyseal region of mandible, between the roots of 4.2 and 4.4. The treatment consisted of surgical removal of the odontoma under local anesthesia. A full-thickness flap was raised, bone was removed on vestibular side and the compound odontoma was exposed and enucleated. The extraction of 8.3 was also performed. The crown of 4.3 was exposed and anchored. The flap was repositioned and sutured.

Results: the postoperative period was uneventful. The patient was referred to the orthodontist to continue the treatment. The follow-up was done at 1 week, two weeks, 3 and 6 months, showing no complications or recurrence.

Conclusions: early detection of odontoma allows a less complex treatment and ensures better prognosis, increasing the possibility of preservation of the impacted tooth.

PULP POLYP IN TRAUMATIZED PRIMARY UPPER INCISOR IN A TODDLER: A CASE REPORT

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Aim: pulp polyp, also called hyperplastic pulpitis, is a pulp, characterized by the overgrowth of granulation tissue within the pulp chamber. It typically occurs in teeth with extensive caries or as a result of dental trauma and is more commonly observed in young patients. The condition can lead to various clinical manifestations such as pain, sensitivity, and discomfort. The aim of this study was to describe the diagnosis and management of a pulp polyp subsequent to a traumatic intrusion associated with a corono-radicular fracture of 5.1 in a toddler.

Methods: a 15-month-old toddler presented with his parents at the Pediatric Dentistry Department of the University Hospital, Federico II, Naples, Italy, after a trauma that had occurred 2 months before. The chief complaint was difficulty eating and discomfort. Clinical examination revealed a corono-radicular fracture of 5.1, accompanied by a pulp polyp, which required prompt management. It was decided to extract the upper right primary incisor. The extraction was performed under local anesthesia, and the patient was discharged with post-operative instructions.

Results: the patient's symptoms resolved without complications. The healing process was uneventful and regular follow-up appointments were recommended.

Conclusions: dental trauma can also be associated with the development of pulp polyp, resulting in significant functional impairments and discomfort.

Extraction of the affected inflammatory response of the dental tooth can be a successful treatment option in very young patients.

SUPERNUMERARY TEETH IN A PEDIATRIC PATIENT: CLINICAL MANAGEMENT

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Aim: Supernumerary teeth (ST) refer to an excess number of teeth compared to the normal dental series. They are frequently associated with syndromes, but multiple ST in individuals with no other disease or syndrome are very rare. The aim of this case report was to describe the clinical management of two included ST in a pediatric patient.

Methods: a 12-year-old boy presented at the Pediatric Dentistry Department of the University Hospital "Federico II", Naples, Italy, with the chief complaint of dental *crowding*. The panoramic radiograph revealed the presence of two included ST, localized in the maxillary anterior region and in close proximity to the floor of the right maxillary sinus, respectively. To study their relationship to the adjacent teeth and other anatomical structures, a cone-beam CT examination was performed. According to the orthodontist, it was decided to extract only the supernumerary tooth located in the anterior region. A palatal semilunar and paramarginal flap was raised from right upper canine to left upper canine. Then, an osteotomy was performed and the supernumerary tooth was removed. The flap was repositioned and sutured.

Results: the post-operative follow-up visits showed no complications and the surgical site healed well within two weeks.

Conclusions: management involves surgical extraction, which can be challenging in certain complicated cases, owing to the risk of injury to the surrounding anatomical structures. Any treatment decision for unerupted ST removal should be assessed and considered individually for each case.

NATAL AND NEONATAL TEETH: SIX CASES WITH A MULTIDISCIPLINARY APPROACH

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Aim: neonatal teething is a phenomenon that can be a cause of feeding problems, traumatic ulceration of the ventral surface of the tongue and risk of tooth inhalation, so early diagnosis is important. This case series aims to illustrate six cases of neonatal teeth treated under sedation for tooth extraction.

Methods: six clinical cases referred to the Neonatology Department of the Maggiore Hospital in Bologna are presented. Four patients are term infants and two are preterm infants. The first dental examination was performed in the infants' first days of life during postpartum hospitalization. The site, clinical appearance and degree of mobility of the teeth were evaluated. Family history and health condition of the mothers were also investigated. The treatment plan consisted of tooth/teeth extraction under sedation followed by histological examination of the extracted tooth(s).

Results: six infants with a total of 12 natal or neonatal teeth were identified (F,4; M,2). All teeth were in mandibular incisor position (100%). No significant differences were observed between males and females in tooth morphology, family history or physical condition of the mother before delivery.

Conclusions: a pediatric dentist should be able to diagnose neonatal and early teeth, provide effective management and treatment in cases requiring extraction in close collaboration with neonatologists and pediatricians.

PASSIVE SMOKING AND PEDIATRIC DENTAL CARIES

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Aim: smoking indoors is harmful to both the smoker and those around them through passive smoking. Children are particularly at risk of health issues due to their developing bodies being constantly exposed to secondhand smoke. One of the potential consequences of passive smoking is dental caries, as the chemicals released from secondhand smoke can affect the mineralization of developing teeth. The aim of this study is to investigate the effect of passive smoking derived from traditional cigarettes and "heated-tobacco" cigarettes (IQOS) on children dental caries.

Methods: this study involved 300 patients, aged 3-6 years old. One single trained Dentist performed the initial visit and collected data on patients' medical history, including dietary habits. The collected data included questions about exposure to smoke and the number of cigarettes smoked daily by family members and the children DMFT. The study analyzed data from three groups of 100 patients each, categorized by family members' smoking habits (non-smokers, traditional cigarette smokers, and IQOS smokers). The data were collected at a pediatric dental clinic in Borgo Cavalli, Treviso, belonging to the University of Padua.

Results: the statistical analysis did not show any significant differences in dmft among patients with non-smoking family members compared to those with family members who smoke IQOS or traditional cigarettes. The literature on passive exposure to IQOS smoke is still limited, and no studies have yet investigated the correlation between passive smoking and caries in deciduous teeth.

Conclusions: although our study did not find any correlation, it is crucial to increase parental awareness regarding their children's oral health. This can be achieved by providing education on pediatric oral hygiene and encouraging regular visits to dentists and dental hygienists from an early age.

USE OF SILVER DIAMINE FLUORIDE: A SURVEY OF ITALIAN DENTISTS' KNOWLEDGE AND BEHAVIOUR

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Aim: to evaluate educational experiences, knowledge, and professional behaviour of Italian dentists in relation to SDF.

Methods: a cross-sectional survey was performed, using a pre-tested and validated questionnaire that was distributed online.

Results: 2733 dentists responded, more than half had over 20 years of work experience. The survey revealed that 6.99% of the respondents received adequate education on the use of SDF during undergraduate studies, 8.47% during post-graduate studies but the majority through online resources, publications, and continuing education courses. A minority of them had good knowledge of SDF use to treat hypersensitivity (18.81%), caries in children (21.45%), and caries in adults (15.30%). Interviewees consider SDF use a proper treatment for non-cavitated caries lesions (62.81%), cavitated enamel lesions (61.92%), cavitated dentine lesions (40.96%), and root caries lesions (37.19%). SDF was also considered as an alternative for treating caries in uncooperative patients (59.50%) and special-needs patients (44.49%). However, only 6.36% of the respondents reported using SDF often/very often to arrest lesions in primary teeth, although 73.51% planned to use it in future. The multivariate analysis showed that dentists who are aware of SDF use in the treatment of caries in children and adults are 2.57 and 1.57 times more likely to use SDF in their clinical practice ($p < 0.01$).

Conclusions: results indicates that Italian dentists require further education on SDF usage to increase its use.

LONG TERM EFFECT OF CANCER THERAPY ON ORAL HEALTH IN CHILDHOOD: A PROTOCOL STUDY

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Aim: the present protocol study aims to investigate the long-term adverse effects on dental and orofacial structures development of anticancer therapy in childhood. In addition, the impact of a prevention program on the oral health status and the quality of life of patients during their hospital stay will be studied.

Methods: an observational case-control and a prospective study will be conducted. Patients enrolled will be categorized in 3 groups: cancer survived children, unaffected children and a prospective group with cancer. Patients will be enrolled at the dental clinic of IRCCS G. Gaslini children's hospital. After consent is obtained, parents/caregivers will be asked to fill the Early Childhood Oral Health Impact Scale and Parental-Caregivers Perception Questionnaire to assess their children's quality of life. Oral examination will be conducted in order to assess caries experience, enamel developmental defects, periodontal health and orthodontic status. If not already available, an orthopantomography will be performed on all children aged six years or more, and a salivary sample will be taken for laboratory analysis of salivary biomarkers.

Results: the data collected will be analyzed to understand the long-term effects of different protocols of anti-neoplastic therapy on oral health, compared to healthy controls. The potential prevention of some adverse effects through an oral health program will be assessed.

Conclusions: the findings may be of clinical relevance in developing suitable strategies for prevention and clinical management of oral diseases in childhood cancer survivors.

ORAL HEALTH STATUS IN CHILDREN WITH RARE DISEASES: A RETROSPECTIVE STUDY

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Aim: children with rare diseases may experience oral health problems due to genetic, metabolic, and immune system abnormalities. The aim of this study was to investigate the oral health status in a pool of pediatric patients affected by rare diseases.

Methods: data from pediatric patients, affected by rare diseases, who underwent a dental visit at the Pediatric Dentistry Department of the University Hospital "Federico II", Naples, Italy, between 2019 and 2022 were recorded.

Results: 190 pediatric patients (109 males and 81 females) (mean age 9.00±4.76), suffering from rare diseases, were visited. 68 patients were affected by congenital malformations or genetic syndromes; 18 patients presented with peripheral and central nervous system alterations; 13 patients suffered from immune system diseases; 12 patients had blood pathologies; 11 patients were affected by rare metabolic conditions; 11 patients presented with skin, eye, respiratory, gastrointestinal diseases; 57 patients suffered from rare diseases still awaiting diagnosis.

Among these, 149 patients were affected by caries; 89 patients showed gingivitis; 30 patients showed dental anomalies. Patients in primary dentition showed higher prevalence of caries, while patients in mixed dentition showed higher prevalence of gingivitis.

Conclusions: pediatric patients affected by rare diseases are at a significantly higher risk of experiencing oral health problems. It is crucial to integrate routine dental visit and preventive interventions into their overall management to improve oral health outcomes.

MAXILLARY CHANGES AFTER TREATMENT OF FUNCTIONAL POSTERIOR CROSS-BITE USING ELASTODONTICS

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Aim: the present study aimed to evaluate changes in maxillary arch and palate morphology in subjects with functional posterior cross-bite (FPXB), using elastomeric appliances, in a retrospective cohort of subjects in early mixed dentition.

Methods: the sample of this retrospective study included 39 subjects: 25 subjects, representing the treatment group (TG), received the activator AMCOP Integral/Basic; 14 subjects, representing the control group (CG), were subjects who postponed orthodontic treatment for 12 months due to the Sars-COV-2 pandemic.

Two intraoral scans were performed before treatment (T_0) and after 12 months (T_1) and the transverse dimension of the palate was calculated measuring the intermolar width (EMW) and the intercanine width (ICW), including emi-lateral measurments. Model superimposition and digital surface analysis was used for morphological evaluation. All data were statistically analyzed.

Results: all subjects showed clinical correction of the FPXB. At T_1, subjects in the TG showed a significant increase in ICW and IMW and a reduction in the differences in eICW and eIMW between both sides. They also show an increase in the percentage match, indicating a recovery of the palatal asymmetry. No significant changes were found between T_0 and T_1 in the CG.

Conclusions: EAs allowed correction of FPXB. An asymmetric pattern of palatal growth was found and located in the dento-alveolar process; such asymmetry significantly improved by the use of EAs, which ensure a restoration of the harmonious development of the palate.

TREATMENT APPROACH TO PRIMARY INTRUSIVE TRAUMA AND ITS COMPLICATIONS: A SCOPING REVIEW

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Aim: dental trauma often represents first approach of the pedodontic patients with dentists. Intrusive luxation is defined as the dislocation of the element deeper into the alveolar socket; its prevalence is about 20% of TDIs on primary teeth with a mean age of 2-3 years old; Aim of this review is to evaluete protocols treatment of Intrusive post-traumatic's issues such as local complications or delayed sequelae on permanent dentition.

Methods: the research was conducted from November 2022 to March 2023, based on PRISMA protocol, using various databases as PubMed, Medline, Scopus, Web of Science, applying idoneous inclusion criteria and using proper keywords: traumatic; intrusion; deciduous theeth; children.

Results: initial screening of databases, including the keywords, provided 167 articles, whom only 15 fully respected the inclusion criteria. The results showed that spontaneous re-eruption occurs between 4 months to 1 year range; Permanent theeth are exposed to high risk of anomalies as a consequence of primary trauma.

Conclusions: "Watch and wait" approach for spontaneous re-eruption or immediate extraction due to high risk of impacting the tooth bud are the election treatments. Nearly one-third of re-erupted deciduous shows complications such as pulp necrosis or ankylosis within the first year, an amount of injured teeth do not re-appear at all; It is therefore important to underline the lack of guidelines or scientific studies concerning management of follow-ups after first approach choice and the necessity of standardized protocol not based on empiric experience.

CARIES RISK ASSESSMENT IN PATIENTS WITH CLEFT LIP-PALATE: CASE-CONTROL STUDY

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Aim: Orofacial clefts (OFC) are the most common craniofacial anomalies. Clefts can be unilateral, bilateral, complete, or incomplete, and may involve the lip only (CL), the palate only (CPO), or both (CL/P). The aim of this study is to determine the caries risk in patients with cleft lip-palate.

Methods: 40 patients (20 patients with orofacial clefts, 20 without pathologies), followed by the Section of Pediatric Dentistry at Dental School-University of Turin, aged 5-10 years. A dental examination was conducted for each patient, with evaluation of the Decay, Missing and Filled Deciduous Teeth (dmft); Decay, Missing and Filled Permanent Teeth (DMFT) and the modified Quigely Hein Index (QHIm). Salivary tests were performed, aimed at measuring the amount of stimulated salivary flow, buffer capacity, salivary pH, *S. Mutans* and *Lactobacilli* counts. The data collected were processed using the Cariogram software.

Results: *S. Mutans* values higher than 10^5 CFU were detected in 60% of the OFC group and 10% in the control group. The buffering capacity of the cleft group (6.9±3.0) is reduced compared to the control group (9.6±2.8). Based on the Cariogram analysis, 25% of patients in the cleft group have a high probability of avoiding caries in the future, compared with 50% in the control group.

Conclusions: our study shows that OFC patients have higher risk of developing caries in the future; they must be followed up by practitioners with greater attention, through close follow-up sessions, correct oral hygiene instruction and applications of topical fluoride products.

ORAL HEALTH IN ADOLESCENTS DEALING WITH EATING DISORDERS: EPIDEMIOLOGY AND SELF-PERCEPTION

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Aim: to evaluate the oral manifestations in eating disorders (ED) affected adolescents, the association between oral lesions and different ED and patients' self perception about oral health.

Methods: patients aged 10-18 years, referred to the Dental Clinic by the neuropsychiatrist after ED diagnosis, were visited to collect data about their oral health. ED affected adolescents also completed a questionnaire regarding previous dental experiences and their perception of their smiles through the Psychosocial Impact of Dental Aesthetics Questionnaire (PIDAQ).

Results: 29 adolescents (96% F, 4% M, mean age 16 years) were included in the study. 79% of them were diagnosed with anorexia nervosa (AN), 7% with bulimia nervosa (BN), 14% with other ED. 17% reported self-induced vomiting (SIV) as purging behaviour. SIV patients presented worse oral health conditions: higher DMFT (3.6), higher prevalence of dental erosion (40%), xerostomia (60%), parotid hypertrophy (25%) and morsicato buccarum (40%) compared to non-SIV. All patients used to go to the dentist regularly and the majority (72%) considered oral health important for general health.

However, only half of them had a dental visit after ED diagnosis and judged their dentist's knowledge about their disease limited. Regarding their self-perception, AN-affected patients were more comfortable with their smile than BN and other ED-affected ones: PIDAQ scores were 27, 39 and 35, respectively.

Conclusions: adequate knowledge of the possible oral manifestations of ED is fundamental to approach and treat the affected adolescents properly.

ORO-DENTAL TRAUMA IN A NORTHEASTERN ITALIAN PEDIATRIC HOSPITAL: AN EPIDEMIOLOGICAL STUDY

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Aim: this study aims to describe the prevalence and features of oro-dental traumatic lesions in paediatric patients referred to the Dental Clinic of the IRCCS "Burlo Garofolo", Trieste.
Methods: this retrospective epidemiological study was performed over 12 months' dental emergency activity. Traumatic lesions of dental, support and soft tissues and temporomandibular joint (TMJ) lesions that occurred within 72 hours in 0-18 aged subjects were registered. For each patient data about place and dynamic of the occurred trauma were also collected from the clinical records.
Results: in a population of 1056 subjects referred to the Emergency Dental Unit (EDU), 116 (11%; 75 M, 41 F; mean age 7.3 years) had a diagnosis of oro-dental trauma: most of them (76%) accessed the EDU at least 6 hours after trauma. The majority of injuries occurred in open-air locations (39%) or at home (37%) for accidental falls (56%), and involved one or more teeth (86%; 55% deciduous, 45% permanent). Dental tissues lesions were more frequent in permanent dentition than in primary teeth (64% *VS* 36%), while the opposite occurred for the support tissue lesions (primary 65% *VS* permanent 35%). Upper teeth were more often involved (86%) than lower ones. Intra- or extra-oral soft tissues were injured in 40% of cases. TMJ lesions were observed only in 8% of patients.
Conclusions: oro-dental trauma were frequent in the paediatric population evaluated and occurred especially in daily life. The dental visit was frequently delayed, while a correct and timely diagnosis is essential for a proper management.

USE OF POSITIVE REINFORCEMENT IN ASD PATIENTS: INTERDISCIPLINARY APPROACH

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Aim: the aim of the study is to investigate the possible potential of using food-type positive reinforcements in patients affected by ASD, in a multidisciplinary study involving dental hygiene professionals and speech therapists.
Methods: the study sample was selected among professionals enrolled in the FLI Scientific Technical Association (Italian Speech Therapy Federation).
To evaluate the patient's knowledge in the field of oral health styles, an anonymous questionnaire was submitted via the Google Form platform.
Results: 50 speech therapists answered the questionnaire and gave the following answers.
They use food reinforcements 23.5%, and specifically: candies 12.5%, fruit juice 6.3%, savory snack 50%, sweet snack 6.3%, 25% other; 86.1% responded positively to the request for specialist dental visits. The questionnaire consists of 11 questions, one part of which refers to the personal operating habits and the other concerns the prevention of the patient assisted in full thickness, also including the management of the oral cavity.
Conclusions: the prevention of pathologies of the oral cavity is a primary importance goal in patients with autism. It is therefore necessary, from the moment the underlying pathology is diagnosed, to include the patient in a program for the prevention of oral pathologies, guaranteeing him a biological and psychological advantage.
The involvement of parents and therapists, in the first place, through motivation, information and education about the pillars of dental prevention is the prerequisite for obtaining valid and lasting results over time.

SINERGY BETWEEN SPACE AND THERAPY: THE DEDICATED APPROACH TO ASD PATIENTS

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Aim: the Department of Pediatric Dentistry and Special Needs Patients has been involved for years in the care of children with ASD, promoting through the project "Sorrisi Speciali" a personalized pedagogical approach that makes chairside treatment possible. In order to create a tailored environment to support our sensory education-based approach, it was decided to restructure the operating environments, with the support of the Department of Architecture, integrating the contribution of design, colorimetry and customization of spaces.

Methods: in order to involve our patients and their families and make part of the renovation process, an anonymous questionnaire was submitted via Google Form, for the choice and selection of colours related to the floors of the operational areas of the Department. The questionnaire provided two choice options: A (Lemonade-Aquamarine colour pairing) and B (Ochre-Blue colour pairing). We explicitly requested that children themselves, as much as possible, expressed their preference.

Results: among the 100 questionnaires sent out, 39 responses were received. 53.8% preferred option B (Ochre-Blue), while 46.2% preferred option A (Lemonade-Aquamarine).

Conclusions: personalization, as well as sensory approach, is the basis of our dental care project, therefore, our goal is to create a new department that can improve the experience of our patients, making them part of the process in order to increase compliance.

EFFECTIVENESS OF TWO DIFFERENT TREATMENTS IN PEDIATRIC CLASS III SUBJECTS: A 3D STUDY

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Aim: the aim of the present study is to compare the effects of acrylic bimaxillary removable plates (Shwarz Appliance) and elastodontic devices (ED) in treating early class III malocclusion.

Methods: the study group included 10 subjects, 5 patients were treated with Schwarz appliances (Group A) and 5 patients treated with elastodontic devices (group B). Digital impressions were taken along with the bite registration before treatment (T_0) and after 1 year (T_1). Occlusal parameters such as overbite, overjet, incisor inclination were recorded using an orthodontic software (Maestro Studio). Morphological changes of the palate were calculated by superimposing 3D models of T_0 and T_1, firstly by using two points located along the mid-palate plane in the anterior region and secondly trough a "best fit" algorithm using the region defined by palatal rugae. All data were statistically analyzed.

Results: a significant improvement in occlusal parameters was found in both groups ($p < 0.05$), restoring a physiological inter-incisal relationship and this confirms the short-term efficiency of both systems in intercepting class III malocclusions. Moreover, in group B there was an important modification of the palatal morphology both in terms of expansion and correction of asymmetry, when recorded at T_0.

Conclusions: elastodontic devices could represent a valid clinical alternative for the interceptive treatment of class III growing subjects.

OSTEOGENESIS IMPERFECTA AND PAEDIATRIC DENTISTRY: A SYSTEMATIC REVIEW

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The aim of this systematic review is to find and highlight the craniofacial features of Osteogenesis Imperfecta, which are of interest in dental practice and occur during the facial development.

Searches in PubMed, Google Scholar, Scopus and Cochrane Library were performed. Parameters included were: English as language of publication, year of publication between 2012 and 2022, age of participants lower than 26. PRISMA guidelines (2020) were used to analyze the studies and report the results. 40 studies met the criteria.

Individuals affected by OI are more likely to develop III class patterns, with hypoplasia of maxilla and anterior cross-bite, as well as posterior cross-bite and both anterior or posterior open-bite. Hypodontia/oligodontia can often occur mainly depending on the type of the OI. Facial profile, transversal dimension and mandibular rotation pattern are not closely linked to the type of OI, while the overall severity of craniofacial features is directly related to its severity. Bisphosphonate treatment slows down the development and the eruption of teeth. Early onset bisphosphonate treatment highly increases the risk of tooth agenesis. Dentinogenesis Imperfecta associated with OI seems to affect primary teeth more severely than permanent ones. DI also increases the risk of hypodontia and oligodontia, which become more severe as the DI features worsen. OI increases the risk of Angle III Class patterns, hypoplasia of maxilla and hypodontia/oligodontia. DI associated with OI also increases the risk for tooth agenesis and affects the primary teeth more severely than permanent ones. Bisphosphonate treatment slows down the development of teeth and delays their eruption. Limitations of the current review are: absence of a protocol, previously registered and tested; heterogeneity of study designs; lack of sample numerosity in the included studies; lack of collected data in most studies. Therefore, a standardized protocol and further discussions are still required.

ORAL HPV BENIGN AND MALIGNANT LESIONS IN HEALTHY CHILDREN: A SYSTEMATIC REVIEW

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Aim: the present systematic review aimed to assess the epidemiology, clinical presentation, and histopathology of oral HPV-related benign and malignant lesions in pediatric subjects (≤18 y.o.) and to evaluate their frequency and types in relation to HPV genotypes and vaccine type (if any).

Methods: the study protocol, compliant with the PRISMA statement, was registered at PROSPERO (CRD42022352268). Data describing oral HPV-related lesions diagnosed through clinical examination and confirmed by histopathological analysis in pediatric subjects were independently extracted and narratively synthesized. The study quality was assessed using the ROBINS-I tool.

Results: of the 60 studies included, 36 were case reports, 19 case series, 3 retrospective, and 2 prospective studies, involving 153 (M:F = 1:1.4) pediatric cases diagnosed (mean age of lesion onset = 8.46 y.o.) with the following oral HPV-related lesions: 47.26% Verruca Vulgaris, Squamous cell Papilloma, and Condyloma Acuminata, 51.37% Focal Epithelial Hyperplasia, and 1.37% Oral Squamous Cell Carcinoma. The viral genotypes detected were HPV-13 (30.61%), -6 (20.41%), -11 (16.33%), -2 (12.24%), -32 (10.20%), -57 (6.12%), and -16 (4.08%). HPV vaccination was reported in any case.

Conclusions: the prevalence of oral HPV-related benign and malignant lesions in the pediatric population needs further investigation. The HPV association with OSCC was described in 2 cases based on lesions' p16 status, although no viral genotype was reported. Nonetheless, the possible independent role of HPV in oral carcinogenesis remains unknown in these cases and underscores the importance of HPV vaccination. Oral healthcare providers should also take a leading role in this scenario in the early diagnosis and treatment of oral HPV-related lesions and in raising awareness of HPV vaccination among pediatric patients and their parents and caregivers.

ALTERNATIVE METHOD OF COMMUNICATION WITH AN UKRAINE MOTHER TONGUE CHILD: A CASE REPORT

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Aim: to explore an alternative non-pharmacological behaviour management technique to facilitate a positive dental experience for ukraine refugees (child/young patients).

Methods: a Ukraine twelve-year-old refugee child presented at our Dental Clinic. The child, with acute pain due to deep decay on the first permanent lower right molar, and her mother were unable to communicate their needs clearly. A first attempt to approach with non-verbal communication and with standard non-pharmacological behaviour management techniques showed to be ineffective: the child refused to receive a complete treatment of the tooth decay. During the second session, we resorted to a new protocol consisting in a combined use of three alternative methods of communication: Picture Exchange Communication System; an accurate written translation of phrases commonly used in dental practice with children; the presence of a Russian mother tongue interpreter who skillfully acted as intermediary between the caregiver, the child and the mother.

Results: the implementation of the common management technique has been a succesfull way to treat a non italian mother-tongue child. Speech, used in a versatile way (in drawn, written or spoken formulations), has created a powerful transfert between the personal and familiar background of the child (and the mother) and the dental equipe.

Conclusions: dental practice with ukraine refugee children should take advantage of further tools, focusing on the importance of the written and spoken mother tongue language as an instrument of reassurance and connection with their well-known pre-war world.

MIDAZOLAM PLUS INHALATION SEDATION IN SPECIAL DENTISTRY: A CASE REPORT

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Aim: to present the case of a child with cognitive impairment, congenital disease, and Attention Deficit/Hyperactivity Disorder (ADHD) and dental fear undergoing conscious sedation for dental therapy.

Methods: a 13-year-old male with severe hemophilia type A was referred to the Dental Clinic for severe jaw pain. The mother attributed the marked lack of cooperation during the visit to ADHD and dental fear induced by the experience of previous bleeding after treatment. Extraction of the mandibular first molar was planned because of severe caries (ICDAS 6). Bleeding control was ensured by preoperative factor replacement. Sedation was achieved by co-administration of Mizadolam oral solution in single-dose container (OZASED 2mg/ml, TheSI Farma s.r.l.) and a 35% nitrous oxide/oxygen mixture. Tooth extraction was performed after inferior alveolar block, and root separation. The procedure lasted about 20 minutes. Blood pressure and oxygen saturation were constantly monitored, and the patient was comforted several times during the procedure with iatro-sedation methods.

Results: mixed sedation overcame the initial anxiety and non-cooperation, allowing the surgical procedure to be completed safely.

Conclusions: behavior management through basic and advanced techniques in special dentistry is essential for the proper treatment of patients with cognitive deficits and medical problems. Both sedation and behavioral techniques, such as show-tell-do, can help overcome fear of the dentist and achieve successful dental treatment.

DENS EVAGINATUS: A CASE REPORT

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Aim: dens evaginatus is an uncommon dental anomaly observed mainly in Asian populations. Developmental aberration of these teeth leads to the establishment of a tubercle on the occlusal surface of posterior teeth and/or from the lingual surface of anterior teeth. The resultant traumatic occlusal force due to chewing results in communions between the pulp and the oral cavity with consequent pulpal complications. Aim of this study is to present a case of dens evaginatus in a 10yo boy.

Materials: A.Y. (Chinese, 10 years old) presented to the Emergency Room of the San Paolo Hospital, University of Milan, complaining of pain in chewing.

On examination, a fistula was noticed on tooth 35 in the absence of caries and an abnormal morphology with the presence of an accessory tubercle in the occlusal position. The viability test was negative and the percussion test positive. Radiographic examinations confirmed the endodontic origin of the lesion and the extension of the pulp to the accessory tubercle. These findings allowed us to make the diagnosis of dens evaginatus. The treatment of choice was apicogenesis.

Results and conclusions: treatment options for dens evaginatus depend on when it is diagnosed. Elective treatment consists of prevention of occlusal trauma by removal of premature contacts as soon as the tooth erupts, application of a flowable composite to protect the area, and application of topical fluoride. If pulpal damage has already occurred, endodontic therapy aims at completion of the root process. Careful and prolonged follow-up is mandatory in any case.

MULTIPLE ABSCESSES IN PRIMARY DENTITION, A CHALLENGING DIAGNOSIS

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Aim: in dentistry, diagnoses are not always simple and certain. The purpose of the present study is to discuss a case of multiple dental abscesses in apparently healthy teeth in a child.

Methods: Y.H.T. (4 years old) with no known systemic disease, came to the emergency department for a previous swelling in the right periorbital area treated unsuccessfully with antibiotics, anti-inflammatories and corticosteroids. Diagnostic exams (CT, MRI, OPT) were performed, which showed several teeth with extensive pulp chambers and almost complete lack of dentin. Fistulous lesions on teeth 5.1, 7.1, 7.4 and grade 1 mobility of 5.2, 5.1, 6.1, 7.1, 7.2 and 8.1 were observed; no caries was detected. Intraoral radiograph of 5.1 showed apical resorption and root radiolucency; percussion test was positive, while vitality negative. 5.1 was extracted. A few weeks later the patient presented new fistulas on 5.3 and 7.2. Root canal treatment of teeth 5.3-6.3-7.4-7.5 was performed under conscious sedation with nitrous oxide. The patient was referred for further diagnosis to the Paediatric Department

Results: diagnostic hypotheses included dentinogenesis imperfecta, regional odontodysplasia, and generalized odontodysplasia. Since all three syndromes did not correspond exactly to the observed clinical picture, a definite diagnosis could not be made.

Conclusions: although it is not possible to make a definite diagnosis, it is important to treat the symptomatic teeth and to preserve the others.

ORAL FEATURES AND OBSTRUCTIVE SLEEP APNEA IN POPLITEAL PTERYGIUM SYNDROME: A CASE REPORT

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Aim: this report describes the oral features of a 5-years old boy who presented to us for dental anomalies and surgical outcomes of cleft lip and palate. He was diagnosed as Popliteal Pterygium Syndrome (PPS), a rare autosomal dominant congenital disorder described by Trelat in 1869, that includes orofacial, cutaneous, musculoskeletal and genital anomalies. This syndrome has some features in common with Van der Woude syndrome, also inherited as an autosomal dominant condition. The minimum diagnostic criteria for PPS are any three of the following: cleft lip/palate, popliteal pterygium, paramedian lower-lip pits/sinuses and genital and toenail abnormalities.

Methods: we present the case of a boy with enamel demineralization, dental fusion, maxillary hypoplasia, anterior cross bite and skeletal third class. He was treated surgically for cleft lip and palate at four months and one year of age. He suffers from obstuctive sleep apnea syndrome. Lower-lip pits represent the opening of a tract leading from a mucous gland embedded in the lip.

Results: from the beginning we used all the primary dental prevention devices in order to maintain the deciduous until their exfoliation. We decided to undergo him a first phase of orthopaedic-orthodontic treatment with Delaire mask to correct skeletal defects on the sagittal plane.

Conclusions: in syndromic anomalies, collaboration between maxillofacial surgeons, pediatric dentists and orthodontists is the key factor for obtaining satisfying results. Meticulous physical examination of the family members and genetic counselling is also required.

GENERALIZED MICRODONTIA IN A YOUNG PATIENT: REHABILITATION AND LONG-TERM MANAGEMENT

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Aim: the target of this report is to present a dento-alveolar discrepancy case caused by generalized microdontia in a child, treated with an orthodontic rehabilitation aimed to the insertion of implant-based prothesis.

Methods: a 13.4-years-old male subject with good general health conditions presented I class malocclusion, over jet and overbite, with a slight lack in mesio-distal width of permanent dentition, also confirmed by orthopantomography and noticeable from diastemas in both dental arches; nonetheless, anterior and overall Bolton's ratios did not show any considerable alteration (77.3% and 91.2% respectively). Therapy lasted for 27 months, and it consisted in two sets of aligners to sequentially mesialize all the teeth and to create four bilateral spaces distally to maxillary and mandibular second bicuspids, stabilization was obtained thanks to thermos-printed containing aligners (Vivera, Invisalign®).

Results: treatment guaranteed I dental class, corrected over jet and overbite and countered microdontia creating four spaces in posterior position to second bicuspids. The patient will have to wear containing aligners until the end of growth to complete rehabilitation with four implant-based prothesis.

Conclusions: a multidisciplinary approach is useful to reach good aesthetic and functional outcomes managing microdontia. In this case orthodontic and containing therapy will allow an implant prosthetic finalization without reconstruction solutions to enlarge dental size.

CONSERVATIVE SURGICAL APPROACH OF A MANDIBULAR INFECTED BUCCAL CYST IN A PEDIATRIC PATIENT

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Aim: the aim of this case report is to describe the surgical excision of a mandibular infected buccal cyst in a 10-year-old patient and to report its histopathological analysis.

Methods: the clinical examination of a 10-year-old male revealed a delayed eruption of the right mandibular first molar that was investigated with an orthopantomography. The radiograph showed a radiolucency involving the area between the right first and second molars. The following CBCT revealed that the lesion was on the buccal aspect of the roots of the first molar. Based on the clinical and radiological appearance of this lesion, it was assumed that it was a mandibular infected buccal cyst. Therapy consisted of a cystectomy, with particular attention not to damage the adjacent anatomical structures. The biopsy of the excised lesion was performed.

Results: the histological evaluation revealed a chronically inflamed cyst lined by a non-keratinized stratified squamous epithelium, that was consistent with the diagnostic hypothesis. The postoperative course was uneventful and the three-months follow-up ortopantomography proved a correct dental and bone evolution on mandibular right molars side.

Conclusions: the mandibular infected buccal cyst is an inflammatory odontogenic cyst that occurs on the buccal and lateral aspects of the roots of mandibular molars at the eruption time.

The inflammation may have an important role in the pathogenesis of this lesion and a conservative surgery aimed at the enucleation of the lesion without extraction of the involved dental elements appears to be the therapy of choice.

OPTICAL COHERENCE TOMOGRAPHY USE FOR ENAMEL DEFECTS IN MOLAR INCISOR HYPOMINERALIZATION

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Aim: Molar Incisor Hypomineralization (MIH) is defined as a hypomineralization of systemic origin of one to four first permanent molars (FPMs) frequently associated with affected incisors, but it could also affect any primary or permanent teeth. MIH can cause several clinical problems such as hypersensitivity, high risk of pulp involvement, tooth loss and aesthetic issues. Optical coherence tomography (OCT) is an emerging hard and soft tissue imaging system investigated as a new potential diagnostic method in dentistry. The aim of this study is to evaluate the *in vivo* enamel structure of MIH patients and related specific OCT scans.

Methods: a total of 20 moderate MIH permanent teeth of pediatric patients (n = 10 incisors, n = 10 FPMs) were tested and 20 healthy teeth (n = 10 incisors, n = 10 FPMs) were controls. The most representative OCT scans were recorded, analyzed and compared.

Results: on OCT scans, healthy enamel and dentin appear as two superimposed distinct layers divided by the dentin-enamel junction while the hypomineralized areas of MIH teeth are characterized by subsurface bright hyper-reflective areas followed by deep hypo-reflective shadowing.

Conclusions: OCT is considered a promising assessment study method for identifying structural models of enamel defects *in vivo*; but, to date, there is a lack of standardization in identifying patterns of different MIH severity. This study provides a basis for this orientation, supporting the use of OCT as a risk-free technique for the validation of remineralization treatment in pediatric patients.

EVALUATION OF PREVALENCE OF OSA RISK AND MALOCCLUSIONS IN PATIENTS WITH RARE SYNDROMES

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Aim: the purpose of the present study is to assess the prevalence of OSA risk and malocclusions in a population of pediatric patients with Okur-Chung, Pitt-Hopkins and Feingold syndromes.
Methods: one pediatric patient for each kind of syndrome was referred to the Pediatric dentistry department at the A. Gemelli Hospital for a complete dental evaluation. Caregivers were asked to complete the Italian version of the Pediatric Sleep Questionnaire (PSQ) in order to assess the risk of suffering from OSA.
Results: based on PSQ results, only the patient affected by Okur-Chung syndrome presented a high risk of suffering from OSA.
The orthodontic evaluation showed maxillary constriction and occlusal wear facets as common signs.
Conclusions: dento-skeletal evaluation revealed the presence of malocclusions in all the studied syndromes. Only the patient with Okur-Chung syndrome suffers from OSA.

PREVALENCE OF DEVELOPMENTAL DEFECTS OF ENAMEL IN A SAMPLE OF CHILDREN WITH AUTISM

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Aim: to investigate the prevalence of enamel development defects (DDE), their characteristics and potential etiological factors, in a sample of pediatric patients with autism spectrum disorder (ASD).
Methods: a cross-sectional study was conducted on 74 subjects affected by ASD and aged between 3 and 15 years. For each patient all erupted teeth were examined, considering the presence of DDE through the Modified-DDE Index. The anamnestic history of the patient (sex, premature birth, vitamin D deficiency, history of infections or hospitalization and intake of antibiotics in the first 3 years of life) and that of the mother during pregnancy were investigated and statistical analysis were done to verify associations between these variables and the prevalence of DDE.
Results: the prevalence of defects in the examined sample was of 45.9%: 34 subjects had at least one DDE. A total of 158 defects were recorded: 130 on permanent teeth and 28 on deciduous one. Among the permanent teeth, those most frequently affected were upper central incisors and first molars while in deciduous teeth the upper second molars were more involved. The most common defects were white or cream-colored demarcated opacity and diffuse patchy opacity. Finally, no statistically significant correlation was found between the variables considered in the anamnesis and the presence of DDE.
Conclusions: this investigation showed a high prevalence of DDE in children with ASD, making early identification necessary to prevent hypersensitivity and risk of carious lesions in special need patients.

PARTIAL PULPOTOMY IN YOUNG PERMANENT TEETH: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Aim: nowadays, partial pulpotomy (PP) is one of the vital treatments for pulp therapy that promotes physiological root development in young teeth with an open apex, avoiding root treatment or extraction; it involves the removal of the inflamed pulp while preserving most of the pulp rich in coronal cells with a good chance of healing due to physiological dentine deposition in the amputated area. The aim of this study was to evaluate the clinical and radiographic success and pathologic outcomes of techniques and materials used for PP in deep caries lesions or post-eruptive breakdown defects in young vital permanent teeth.

Methods: a literature search was performed using three databases: Pubmed, Embase and Scopus. The selected studies should be RCTs or retrospective studies including a population <21 years and with a follow up period of ≥12 months. From 3017 articles retrieved, 9 were eligible and included in the systematic review of which 5 in the meta-analysis.

Results: the overall success rate of PP at 12-month follow-up was greater than 85% in all studies considered, regardless of the technique or material used. Clinical and radiographic success was considered comparable in all studies. Additionally, the studies included in the meta-analysis did not indicate any statistically significant differences in success rates when Mineral Trioxide Aggregate was compared to calcium hydroxide ($p = 0.059$).

Conclusions: PP could be a valid option in cases requiring vital pulpal therapy in young, highly damaged permanent teeth, allowing more invasive endodontic treatments to be postponed.

PREVALENCE OF SYNDROMES MANAGED IN A PEDIATRIC DENTISTRY DEPARTMENT (UNICA)

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Aim: to Report the percentage of syndromic cases with oral cavity involvement in children in the Pediatric Dentistry Department of the University of Cagliari.

Methods: 1040 medical records with their radiographic images, clinical diary, age, sex of the patients and any therapies carried out were viewed using anamnestic information. Some patients arrived in the Department addressed by their family doctor and others from pediatric hospitals.

Results: in our research we found 59 syndromic patients with an age between 3 and 19 years old and a percentage of the total number of records of 5.6%. The most frequent syndrome was Down syndrome with 13% of cases followed by Goldenhair syndrome (6.7%), DiGeorge syndrome and Noonan syndrome both with 5% of cases; 13 had malocclusion (22%), 4 jaw bone abnormalities (6,7%), 32 had treated for several caries (54%), 3 presented oral soft tissue lesions (5%).

Conclusions: no studies have evaluated the prevalence and the characteristics of the syndromes within a Pediatric Dentistry Department. Currently in the international scientific literature there are no protocols for the management of syndromic pediatric patients on related oral problems. Further epidemiological and retrospective studies should be conducted in order to better characterize the problem and to draw up effective treatment and prevention protocols.

ORAL TRAUMATIC LESIONS IN PEDIATRIC PATIENTS: EPIDEMIOLOGICAL STUDY *VS* LITERATURE DATA

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Aim: to state the frequency of oral traumatic tissue lesions in the Department of Pediatric Dentistry in Cagliari University Hospital "San Giovanni di Dio" compared to literature.
Methods: we performed a deepen review of the literature to establish which kind of traumatic lesions of the soft tissues is the most common in pediatric people. Then we compared those results to the ones obtained by an epidemiological study we carried out in our Pediatric Dentistry Department.
Results: over 80 scientific papers for our review and 1070 medical records for the epidemiological study were analyzed. The epidemiological study considered 31 patients, 14 girls and 17 boys (2.88% of the total amount of the medical records). Dental traumas associated with mucosal traumas are the most frequent lesion we detected (11/31 cases, 35,46%). 2nd place is taken by fibrous – exophytic lesions (4/31 cases, 12.90%) and at 3rd place morsicatio buccarum and ulcers, each with 3 cases out of 31 (9.68%). Data in literature see fibrous lesions, mechanical traumas and ulcers on top 3 of the most common traumatic mucosal lesions. Piogenic granulomas and mucocele are strongly represented in literature, but we did not find the same evidence in our study. We found no correspondence even for morsicatio lesions.
Conclusions: even if our results differ a little from the data in literature, we could assure that lesions of the oral mucosae we detected in our department follow the global trend we found in literature. The bigger discrepancy may be due to the fact that our department is not specialized in Oral Pathology.

EVALUATION OF STRESS AMONG POST-GRADUATE DENTAL STUDENTS: A NARRATIVE REVIEW

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Aim: stress is becoming a significant part of the everyday life of medical students, trainees and qualified physicians. Medical faculties are stressful and demanding. Aim of this review is to summarise articles reporting on stress among dental residents.
Methods: PubMed was searched for articles published in the last two decades reporting on stress among dental residents. The literature search yielded 407 papers: 48 were obtained in full-text format, out of these 8 were selected and 3 more were added after hand searching. A total of 11 studies were included.
Results: studies suggest a high prevalence of stress among dental residents. The most used scales were the Perceived Stress Scale (PSS) and the Modified Dental Environmental Stress (DES/GDES). The hazard ratio of moderate stress evaluated in the selected studies, was nearly 50% (range 22%-78.4%). Long working hours and lack of free time were found to be the most reported sources of stress among dental residents, followed by financial issues.
Conclusions: stress among dental residents has been observed in many countries and it has been incredibly reported in literature. Some stress is beneficial for stimulating better performance, but it may have a negative impact in both emotional and somatic field, stimulating feelings of fright and lack of ability. It may also lead to poorer performance, increased errors, decreased productivity, worse quality of care for patients and burnout. Studies on how to prevent stress among dental residents are needed.

IMPACTED PRIMARY AND PERMANENT TEETH IN CHILDREN

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Aim: impaction is an eruption failure of a tooth due to obstacles in the eruption path or abnormalities in its position. Teeth can be unerupted, retained or partially erupted based on clinical and radiographic evaluation. This phenomenon is more frequent in permanent dentition. Even if the maxillary canine is the tooth most often impacted in the anterior segment, overall, the most impacted tooth is the third molar. This study aims to present a review on impacted teeth in children.

Methods: PubMed and Embase were searched using the following key words: impacted teeth, retained teeth, primary dentition, permanent dentition, children.

Results: tooth impaction in the permanent dentition ranges from 0.8 to 3.6%. It is very rare in the primary dentition, occurring in 1:10000 cases and mainly involving secondary molars. Impacted primary and permanent teeth present a variable and multifactorial etiology. Systemic and local factors can contribute to impaction: fibrous hyperplasia of the gingiva, space deficiencies, insufficient maxillofacial skeletal development, trauma, premature loss or prolonged retention of primary teeth, abnormal eruptive path, odontogenic tumors such as odontomas, cysts. 3D imaging techniques should be used to obtain a precise diagnosis of the location of the impacted tooth. Management technique includes the removal of any obstruction and exposure of the unerupted tooth. Orthodontic attachment can be used to bring the tooth in the dental arch.

Conclusions: the early detection and treatment of impacted teeth are crucial for the proper development of children.

ORAL SIGNS OF HYPOPHOSPHATASIA: A NARRATIVE REVIEW

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Aim: this narrative review aims to provide knowledge about hypophosphatasia (HPP), particularly regarding oral signs, so that the condition can be recognized early and treated with a multidisciplinary approach.

Methods: this literature review was conducted by screening the literature using keywords related to hypophosphatasia, oral signs, and potential treatments in PubMed. Some articles were also examined at the University Library of Pisa. First, we selected 150 scientific works based on relevance and contribution to the topic. Subsequently, after a deeper analysis, we restricted our pool to the most pertinent 10 articles.

Results: the common dental signs are primary tooth loss before the age of three years with intact roots without signs of inflammation or trauma. The level of marginal alveolar bone may be reduced with relative vertical bone loss. Teeth can have larger pulp chamber extending to root canals. Histological analysis showed that both acellular and cellular cement are affected. Sharpey's fibers do not connect the collagen fibrils of the gingival ligament to the cementum. Action must be taken with both specific preventive programs and interceptive orthodontic or prosthetic interventions to avoid aesthetic and language problems.

Conclusions: it is very important for patients and their treating physicians to connect with specialized referral centers. Follow-up of patients with HPP can deepen the knowledge of the disease and make the diagnosis of hypophosphatasia more immediate.

INFLUENCE OF BLACK STAIN ON DENTAL CARIES: SYSTEMATIC REVIEW OF THE LITERATURE

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Aim: Black Stain (BS) has been considered a form of dental plaque differentiated from other types by insoluble iron salt and high calcium and phosphate content. The aim of our research is to evaluate whether the administration of toothpastes or mousses based on lactoferrin, which determine resolution of BS, can also influences the DMFT index of the same patients.

Methods: our research has been done by collecting articles form Cochrane Central Register of Controlled Trials, PubMed, Scopus e Web of Science. We used as mesh terms “black stain”, “black stain and caries”, “black stain pigmentation”.

Results: considering nineteen selected articles with a sample of 290 BS patients, it can be describe a reduction of the main DMFT values to 60% compared to the same sample of non-patients suffering from BS.

The mean DMFT and mean DMFS were both statistically lower in children with black stain. Actinomyces colonization enhances the level of Actinomyces antibodies, which also have an inhibitory effect on caries.

Conclusions: in conclusion, the bacterial composition of BS with lower number of *Lactobacillus sp*. and *F. Nucleatum* might be associated with less caries experience in children with BS. There is no sufficient evidence to affirm the variability of influence on DMFT following the administration of toothpastes and mousses containing lactoferrin.

THE TREATMENT OF THE PATHOLOGICAL LINGUAL FRENULUM: A SYSTEMATIC REVIEW

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Aim: ankyloglossia is a congenital anomaly characterized by a short or ipertrofic lingual frenulum. This condition is treated with surgery and myofunctional therapy due to its consequences on breastfeeding, pronunciation, abnormal maxillary bone’s development, nocturnal respiratory disorders. This study aims to analyze and compare the current evidence of diagnosis and the surgical methods and treatments of patological frenulum in young patients.

Methods: a systematic review of the international literature was conducted on PubMed and Pubmed Central databases. The chosen keywords were: “frenulum” “frenulectomy” “lingual” “ankyloglossia” “laser”. Then the research has been restricted considering the articles published in English between 2000 and 2022.

Results: 14 articles were included in the review. 10 studies found more advantages using diode or CO_2 laser than traditional surgery.

Many studies showed an improvement both in mobility of tongue and in quality of pronunciation of words, although some studies reported a non-significant difference between surgery and myofunctional therapy.

The limitations of this review are: a few published articles, a small number of the sample size and the lack of universal standardization for hypertrophic frenulum.

Conclusions: there is not a management protocol for this pathological anomaly yet. So far diode laser therapy is the first choice by clinicians due to successful outcomes compared to the use of scalpel.

MECHANICAL VENTILATION PNEUMONIA AND ITS RELATION WITH HOSPITALIZED CHILDREN ORAL HYGIENE

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Aim: Hospital-acquired pneumonia (HAP) is a serious condition that can lead to severe complications and increased mortality rates, particularly in pediatric patients on mechanical ventilation. Although the rise in HAP cases has been well documented in recent years, little attention has been paid to the potential role of poor oral hygiene in the development of this condition. The oral cavity is a rich source of pathogenic bacteria that can be easily aspirated into the lungs of patients on mechanical ventilation. Therefore, improving oral hygiene practices may be a critical step in preventing the development of HAP in this vulnerable patient population. This literature review aims to investigate the potential correlation between poor oral hygiene and HAP, and to explore the efficacy of preventative measures such as oral care bundles in reducing the incidence of this serious condition.

Methods: the utilization of “AND” or “OR” Boolean operators was applied during an exhaustive search on Medline and Scopus databases to retrieve articles that include the keywords “oral hygiene”, “children”, and “Hospital-acquaired pneumonia”.

Results: after conducting a comprehensive search, a total of 177 articles were identified as potentially relevant. Following the elimination of duplicates and a thorough assessment of titles, abstracts, and full texts, we ultimately selected 9 articles for inclusion in this review.

Conclusions: the literature has shown promising results regarding the efficacy of pharmacological and mechanical treatments in reducing or delaying the onset of ventilator-associated pneumonia. However, the impact of chlorhexidine as a preventative agent is not yet fully understood, as several investigations conducted in recent years have uncovered evidence that appears to be against its use. Nevertheless, the healthcare of pediatric patients requires significant recognition and consideration, particularly when it comes to dental issues that are frequently underestimated.

DENTAL ANOMALIES AFTER CHEMOTHERAPY WITH ALKYLATING AGENTS IN CHILDREN: SYSTEMATIC REVIEW

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Aim: patients treated with chemotherapy during childhood have a great possibility of suffering from dental abnormalities on permanent teeth. This study aimed to estimate the late effects of alkylating agents on permanent dentition.

Methods: 71 articles were found from four database using key words “Chemotherapy”, “Dental anomalies”, “Pediatric population” from the past 10 years. We included 26 studies written in English where was possible to discriminate chemotherapy and radiotherapy effects in children treated with alkylating agents.

Results: cancer survivors under five years treated with chemotherapy, including with alkylating agents, have a high risk of presenting the following dental anomalies: microdontia, agenesis, enamel defects, taurodontism, delayed eruption and root development abnormalities.

Conclusions: current literature evidence that chemotherapy is associated with adverse effects on permanent dentition, but none of the studies specifically evaluated the effects of alkylating agents, so further studies are required to assess the correlation between these drugs and dental anomalies.

EARLY FLUORIDE EXPOSURE AND MIH-RELATED DEFECTS: A DOSE-RESPONSE META-ANALYSIS

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Aim: the relation between early fluoride exposure and the occurrence of Molar Incisor Hypomineralisation (MIH) defects is still controversial. This systematic review and meta-analysis aimed at assessing whether fluoride is a protective or a risk factor for MIH defects, also investigating such relation through a dose-response approach.

Methods: we conducted a systematic literature search up to 22 November 2022, using combinations of terms related to "fluoride" as exposure and to "molar incisor hypomineralisation" (e.g. "demarcated opacities", "developmental opacities") as outcomes. We performed a meta-analysis through forest plots comparing the highest versus lowest fluoride exposure using a random-effects model, and we quantitively assessed this relation using linear meta-regression.

Results: out of 315 potentially relevant records, 13 eligible papers were identified, 12 of which were also suitable for the dose-response meta-analysis. Comparing the highest versus lowest exposure categories for water fluoride, a slight protective role of fluoride was identified, with an odds ratio of 0.93 [95% confidence interval 0.60; 1.45]. The dose-response analysis for exposure to fluoride from drinking water showed a decreasing MIH risk for exposure up to 1 mg/L, whereas an increase in MIH risk emerged at higher exposure levels.

Conclusions: early systemic exposure to fluoride may affect the occurrence of MIH defects differently depending on fluoride concentration. However, these results need to be evaluated with caution due to potential methodological limitations of the included studies.

ANTI-BIOFILM ACTIVITY OF A MOUTHRINSE CONTAINING CALCIUM HYDROXIDE AND UMBELLIFERON

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Aim: calcium hydroxide-umbelliferon association is claimed to exert anti-inflammatory effects on the oral mucosa, but the anti-plaque activity, especially in pediatric patients, has been poorly investigated. This study aimed to assess the *in vitro* antimicrobial activities of a mouthrinse containing 10% calcium hydroxide and umbelliferon (Litopsor).

Methods: *lactobacillus salivarius* ATCC 11741, *Streptococcus mutans* ATCC 25175, *Actinomyces naeslundii* ATCC 12104 and *Candida albicans* ATCC 90028 were chosen as test microorganisms. Crystal violet (CV) assay, MTS assay and Live/Dead Baclight Bacterial Viability (LD) assay were performed in triplicate and in presence/absence of sucrose.

Results: sucrose improves biofilm formation in all microorganisms (CV assay). MTS assay showed that the exposure of biofilm to the mouthrinse produced different effects: for *A. naeslundii* a statistically significant decrease on 48h-biofilm with and without sucrose; for *S. mutans* a decrease on 24h-biofilm without surcrose; for *L. salivarius* a decrease on 24h-biofilm with sucrose; for *C. albicans* a slight decrease only on 24h-biofilm. LD assays were performed only on 48h-biofilm grown with sucrose. After 5 min exposure, dead cells were detected only in *A. naeslundii*.

Conclusions: the mouthrinse containing 10% calcium hydroxide and umbelliferon (Litopsor) showed different anti-biofilm activity depending on the microorganism under test. This product, being alcohol-free, could be recommended in pediatric patients as an adjunct to mechanical oral hygiene. Further studies are needed to assess the antimicrobial activities in the early stages of biofilm formation.

DENTAL TREATMENTS UNDER GENERAL ANESTHESIA IN UNCOOPERATIVE CHILDREN: RETROSPECTIVE STUDY

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Aim: General anesthesia (GA) to provide dental treatments is not only reserved to children who are medically compromised, but it is a strategy for treating healthy children who are uncooperative, because of young age or anxiety. This study analyzed the characteristics of dental treatments conducted under GA in pediatric patients.

Methods: data from pediatric patients, who underwent dental treatments under GA at the AORN Santobono-Pausilipon Hospital, Naples, Italy, from January 2011 to December 2022, were recorded. The following data were collected: gender; age; health status; anesthetic procedure; adverse events; dental procedure performed.

Results: 2331 pediatric patients (1359 males and 972 females) were treated. Mean age was 6.3±2.6 years. 1748 patients were healthy and uncooperative and 583 were medically compromised. In relation to the anesthetic procedure, 36.4% of patients underwent oral endotracheal intubation, 3.6% of patients underwent nasal endotracheal intubation and 60% of patients were treated with facial mask. Two adverse events occurred (1 massive intra-operative bleeding and 1 delayed awakening). Relatively to the dental procedure, 2086 patients were submitted to dental extractions; 53 patients to supernumerary teeth removals; 6 patients to odontomas removals; 23 patients to soft tissues neoformations excisions; 158 patients to frenulectomies; 5 patients to cysts excisions.

Conclusions: different types of dental treatments under GA can be safely provided in a hospital setting both for healthy uncooperative and for medically compromised children.

ASSOCIATION BETWEEN DMFT/DMFT INDEX AND DIET IN FOREIGN CHILDREN

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Aim: this cross-sectional study was conducted to evaluate an association of diet and oral hygiene practices with DMFT/dmft (decayed, missing and filled teeth) of children between 0 and 8 years of age, immigrants or born in Italy to foreign parents, and the impact of a multicultural diet on caries etiopathogenesis.

Methods: the study included 200 children visited in our Dental Clinic. A questionnaire consisted of sociodemographic information and some questions about current diet and oral hygiene practices was provided to the participants. After acquiring the dataset, all children's DMFT/dmft scores were assessed and recorded. The children were divided into four different ethnic groups (Africa, Asia, Eastern Europe and South America).

Results: the highest mean DMFT/dmft value was in Eastern Europe group, equal to 5.68 per child, followed by Africa (4.56), Asia (4.22) and South America (3.40) groups. However, cavities are more frequent in Africa group with a higher number of affected patients compared with healthy subjects belonging to the same group. Caries has a homogeneous distribution in both genders in the Africa and Eastern Europe groups, while females were more affected in the Asia and South America groups.

Conclusions: the sample studied shown different DMFT/dmft values and stratification of reports in the four groups. This study further augmented the contributory role of diet in the development of caries. A strong relationship of decayed and missing teeth with dietary variables (like meals per day, use of snacks in between meals and frequency of sweets) was displayed.