

Poster Communications

BEHAVIOR

1. THE TYRANT CHILD IN PEDIATRIC DENTISTRY

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Introduction: According to the dictionary of the Real Academia Española (Royal Spanish Academy), tyranny is defined as the abuse or imposition of any power, strength or superiority to an extraordinary degree. The “tyrant child” is associated to several synonyms, such as little dictator, the Little Emperor Syndrome, or even manipulative child. This terminology is used to describe the psychological disposition of children in their relationship with their parents.

Objective: The objective of this work is to describe the profile of the so-called “tyrant child”, in order to identify the type of behavior that may affect treatment success in pediatric dentistry.

Materials and methods: The method used was a review of the literature published between 2005 and 2015. References were obtained through the use of the *PubMed* search engine, and the keywords searched were *Tyrant Child*, *Emperor Syndrome*, *Oppositional Defiant Disorder*. Searches were also conducted in psychology and pediatric dentistry books.

Results: The tyrant child presents a behavior disorder that is currently arising with greater frequency in today’s world. This syndrome is characterized by aggressive behavior, and defiant and demanding conduct.

As the child grows, he or she starts to show certain signs. They become impulsive, self-centered, generate fear in others, are not able to accept criticism, are afraid of new situations, show a low tolerance for discomfort and have intense emotional reactions.

In the references found, it is considered of utmost importance the ability to establish boundaries in response to the implicit or hidden threats posed by these children.

Conclusions: It is necessary to establish guidelines for managing the behavior of the “tyrant child”. Because they will defy any authority figure, they represent a challenge for the pediatric dentist who is treating them.

Because they tend to be rebellious, contradictory and do not accept the instructions set forth by adults, approaching them represents a challenge, which is why it is difficult to carry out a dental treatment in satisfactory terms.

There is little bibliographical material relating to the management of the “tyrant child” in the dental consultation. How-

ever, it is essential to understand the characteristics that distinguish them, so as to try to direct their behavior and achieve treatment success.

2. SOCIAL AND FAMILY PREDISPOSING FACTORS OF OPPOSITIONAL DEFIANT DISORDER IN CHILDREN: IMPLICATIONS IN PEDIATRIC DENTISTRY

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Introduction/Justification: Oppositional Defiant Disorder (ODD) is a recurrent pattern of negativistic, defiant, disobedient, and hostile behavior, aimed at authority figures.

Children with Oppositional Defiant Disorder represent a major challenge for the dentist: they delay and complicate treatment.

Therefore, it is necessary to know and understand the social and family predisposing factors for this type of disorder, in order to develop strategies that will allow us to better manage their behavior.

Objective: Conduct a review of the literature on the social and family factors which predispose the development of Oppositional Defiant Disorder in children, and analyze the implications in the field of pediatric dentistry.

Material and methods: We conducted an initial search in major databases (Pubmed, Google Scholar, EBSCOHost and WoS), for the keywords: “oppositional defiant disorder, conduct disorder, risk factors, pediatric dentistry”. We found 1051 articles, which were filtered by title and abstract, thus reducing them to 497. The full text was obtained for 210 preliminary articles. The search was filtered with the use of inclusion and exclusion criteria: articles published between 2000 and 2016 in high-impact journals, children 3-12 years old, and language (English, Spanish or French). Eighteen articles were included, in which the abstracts specified the data needed to apply the selection criteria.

Results: The diagnosis of ODD is mainly based on clinical evaluation, with the diagnostic criteria described in the DSM-V-TR as reference.

The etiology of the Oppositional Defiant Disorder is best understood in the context of a biopsychosocial model, in which the biological vulnerability of a child and the protective factors interact in complex ways with the protection and damaging aspects of his or her environment.

The biggest family predictors are numerous, single-parent families, with young parents, in which one of the two presents a psychopathology; a negligent or authoritarian education style, low socioeconomic status and a deficit in the children in terms of interaction with their classmates.

Conclusions:

1. There are several family factors that influence the development of ODD; the fact that they all overlap makes it difficult to establish any clear causal links.
2. The clinical management of ODD is complex; they usually ignore any order given to them. Instructions must be simple, clear, and concise.

3. THE INFLUENCE OF THE FAMILY, CULTURAL AND SOCIO-ECONOMIC ENVIRONMENT ON DENTAL ANXIETY IN CHILDREN

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Introduction/Justification: The presence and assessment of dental anxiety is important in pediatric dentistry, as it often causes behavioral problems in children during dental treatment, thus making it more difficult or even impossible to carry out.

Despite the numerous publications that have focused their research on analyzing dental anxiety in children, its prevalence varies from 3 to 43% in different studies conducted around the world. This justifies the need to continue studying the factors involved in the etiology of dental anxiety in children.

Objective: To analyze the influence of the socio-economic, cultural, and family environment on the level of dental anxiety in children, through the present bibliographic review.

Material and methods: A bibliographic search was conducted in PubMed/Medline, Web of Science, EbscoHost, and Google Scholar. The keywords were: “dental anxiety”, “children”, “culture”, “socioeconomic factors”.

This search for and selection of articles was established with the following criteria: articles published in the last 15 years, in English or Spanish, full text, that include the search terms in the title or in the abstract and were published in high-impact journals, thus excluding the articles that do not contribute to the achievement of the objectives.

Results: The etiology of dental anxiety in children is multifactorial and among the factors that may contribute to its appearance, we find the culture and the socioeconomic level of the child's environment.

Several studies indicate that children with a lower social level present a high prevalence of dental anxiety. Other publications do not establish a link between socioeconomic status and level of dental anxiety.

With respect to culture, some authors claim that cultural beliefs and values play a significant role in the way in which children express anxiety, and its effect, along with other vari-

ables, may be one of the reasons why dental anxiety varies depending on the place where the study is conducted.

In studies conducted in Asian countries, the prevalence is 19.5%, 30.6% in the United States, and approximately 5.7% to 6.7% in Northern European countries.

Conclusions: Socioeconomic level and culture may affect the variability of expression and measurement of dental anxiety in children. These would be variables to be considered when recording data during a child's first visit, due to their connection to the level of dental anxiety, and their influence on the cooperation and acceptance of dental treatments.

4. MANAGING PATIENTS WITH AUTISM SPECTRUM DISORDERS (ASD) IN ORTHODONTIC TREATMENT

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Introduction: Patients with Autism Spectrum Disorders (henceforth ASD) do not have very specific oral pathologies. They represent the biggest challenge to dentists, due to their complex and varied clinical manifestations. The treatment methods that may produce a positive result in one patient may be ineffective for another. Additionally, there is a limited number of studies that have addressed the techniques for managing basic behavior and the changes in procedure relating to the dental treatment of children with ASD.

Objectives: To show the possibility of orthodontic treatment with fixed multibrackets in patients with ASD.

Case reports: Several clinical cases of patients with ASD are presented at the Research Group for Special Needs Dentistry at the USC (Universidad de Santiago de Compostela). After careful review of the clinical history with parents to collect the specific characteristics of each patient, an individual assessment was carried out regarding the possibility of conducting “complex” orthodontic treatments. All types of infectious disease were previously treated and controlled.

Comments: After that, a protocol of systematic desensitization was administered before the first orthodontics consultation, where parents and teachers played a fundamental role, using different tools, such as pictograms (Murshid 2015). Due to the limited attention span of patients with ASD, short, well planned appointments, with virtually no waiting time were deemed necessary (Schindel et al. 2014, Udhyia et al. 2014). Taking into account the need for the proper environment on the chair, an orthodontic study was carried out, which included radiographies, plaster casts, and intra and extra-oral photographs. By implementing routine processes where the ‘tell-show-do’ was instrumental, in successive appointments, we proceeded to the gradual placement of fixed multibrackets, depending on the tolerance level of each patient.

Conclusions: It is possible to carry out complex orthodontic treatments in patients with ASD, once the individual

assessment is made, thus gaining insights on the proper dental environment and the behavior control techniques customized for each patient according to their needs.

5. THE IMPACT OF BREASTFEEDING IN THE ORAL CAVITY

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Introduction: Breastfeeding offers numerous advantages for a baby's health. For this reason, the WHO, the EU, and the Breastfeeding Committee of the Spanish Association of Pediatrics recommend breastfeeding exclusively for the first six months of life and supplementing it with other foods until 2 years of age or older.

The influence of breastfeeding in the development of Early Childhood Caries (ECC) is a highly debated and controversial issue.

Early Childhood Caries (ECC) is defined as the presence of one or more carious lesions (cavitated or non-cavitated), missing teeth due to caries, or fillings for any primary teeth in children up to 6 years of age. In children under 3 years of age, any sign of smooth surface caries is defined as severe ECC.

Caries is a multifactorial disease that involves individual risk factors, community risk factors and time.

For several years now, the use of 1000 ppm fluoride paste in small quantities twice a day has been recommended starting with the eruption of the first tooth.

Objectives: To conduct a review of the literature on the link between breastfeeding and the emergence of Early Childhood Caries.

Material and methods: A search was conducted on the PubMed and Web of Science databases, with the use of the following keywords: "early childhood caries", "dental caries", "toothdecay", "breastfeeding", "human milk", "breastfeeding promotion", "benefits of breastfeeding" and "oral health".

The selected articles included these terms in the titles or abstracts. The results mainly comprised review articles and observational and experimental studies.

Results: There is no scientific evidence to support the link between breastfeeding and caries.

All of the studies that try to link breastfeeding to ECC present major methodological deficiencies, do not provide a clear and consistent definition of breastfeeding, and do not take into account other important factors involved in the development of caries, such as the amount of sugars ingested or oral hygiene among others.

Conclusions: Given that there is no scientific evidence to support the link between breastfeeding and caries, and on the other hand, breastfeeding has been proven to offer numerous health benefits, including oral health, dental professionals should support the recommendation of breastfeeding, promoting the practice of proper oral hygiene in children starting with the appearance of the first tooth.

6. BEHAVIOR MANAGEMENT TECHNIQUES IN PATIENTS WITH AUTISM SPECTRUM DISORDERS (ASD)

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Introduction/Justification: The number of people diagnosed with autism spectrum disorder has increased in recent decades. Autism is a developmental disorder in which social interaction, language, behavior and cognitive functions are severely affected. The behavioral problems that are typical in this disorder represent a barrier in the access to dental care.

Objectives: To conduct a detailed review of the existing scientific literature on the different techniques for communication and behavior management in patients with ASD that facilitates a comprehensive treatment in the dental consultation.

Material and methods: A bibliographic search was carried out of articles published in the last 5 years in the Pubmed database. The keywords used were: "dental treatment autism", "behavioral techniques", "dental management".

Results: There is no single protocol of behavior management in patients with ASD. The techniques most often used by the dentist in the dental practice are: visual education, behavior modification techniques, communication techniques, physical control techniques and pharmacological techniques, although not all present the same degree of success. This is why it is recommended that dentists have a pre-interview with the family and therapists to facilitate the first contact with the patient.

Conclusions: Dentists should be trained and be familiar with all of the psychological and pharmacological management techniques, as well as systematic desensitization protocols, with the goal of facilitating these patients' access to oral attention. The choice of treatment should be individualized and adapted to suit each autistic child.

ORAL MEDICINE

7. THE EFFECTIVENESS OF TOPICAL TREATMENTS IN ORAL ULCERS IN CHILDREN AND ADOLESCENTS WITH ORTHODONTIC APPLIANCES

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Introduction/Justification: The lesion of the oral mucosa during orthodontic treatment is very common, caused by the

friction produced by the different structures which are routinely used in orthodontics such as brackets, bands, tubes, wires and functional appliances.

Oral ulcerations are the most typical consequence to such trauma. For their treatment, numerous therapies have been suggested, with a great deal of literature on the subject but with inconsistent results. For this reason and due to their high incidence and the inconvenience they cause, a study of the effectiveness of different topical treatments for oral ulcerations would be justified.

Objective: To carry out a review of the literature in order to assess whether there are significant differences between the topical treatment and the absence of treatment, with regard to the traumatic oral ulcers in children and adolescents with orthodontic appliances.

Material and methods: For the bibliographic search, the following databases were consulted: Google Scholar, Pubmed, Web Of Science and EBSCOhost, and the following keywords were used: “therapeutics”, “treatment”, “oral ulcer”, “orthodontics”, “brackets”.

Full-text articles were included, in English or Spanish, which contained the search terms in the titles or abstracts, excluding the articles that did not contribute to the achievement of the objectives.

Results:

- Washing the mouth with chlorhexidine 0.2% significantly reduces the incidence, severity, and duration of aphthous ulcerations. While in the form of a gel, it only reduces gravity and duration, but not the incidence.
- The pain and size of the ulcers is greatly reduced after the application of Fitostimoline Gel and low-intensity laser, or both combined, when compared with the control group. The effects of the medication are slower than laser treatment, and the effect of the combined use of both does not differ from the one obtained by only applying the laser treatment.
- A new topical treatment that contains, among other components, Nystatin, tetracycline and metronidazole is effective in reducing the size and curing oral ulcers. While the pain disappears earlier in patients receiving this treatment than in the control group, this difference is not statistically significant.

Conclusions: While oral ulcers are lesions of the oral mucosa that heal by themselves, there are several topical treatments which significantly reduce symptomatology, size and duration of the same.

8. RISK ASSESSMENT AND CAMBRA PROTOCOL TO REDUCE THE INCREASE IN CARIES. SYSTEMATIC LITERATURE REVIEW

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Introduction: The CAMBRA (Caries Management by Risk Assessment) Protocol was designed for the prevention, diagnosis and treatment of caries through the creation of individualized guidelines depending on the level of risk of caries.

Objectives: To evaluate, based on scientific evidence, the effectiveness and efficiency of the CAMBRA Protocol on the prevention and minimization of cariogenic lesions.

Materials and methods: The PubMed, Scopus, Cochrane - Library databases were consulted, with the use of the following MeSH terms: (CAMBRA Protocol) / (CAMBRA Risk Caries) / (Caries Management by Risk Assessment). Specific inclusion criteria (PICOS) for the selected studies were used. A pre-designed template with 16 items was used for the extraction of results. Data was extracted by a single reviewer (LS). The quality of the studies was assessed with the use of the Cochrane Risk of Bias Tool. Case reports, letters to the editor, editorials, case series and other methodological studies were excluded from this review.

Results: The retrospective CAMBRA analysis reported a higher incidence of cavitated lesions among those deemed to be patients of extreme risk compared with low-risk. According to the CRA, the evidence concerning the validity of existing systems was limited. We do not know if the identification of high-risk individuals may lead to a more efficient management of patients in the long run, and prevent the start and end of caries or reverse the progression of the lesions. There is currently an urgent need to develop valid and reliable, more evidence-based methods for the evaluation of the risk of caries.

Discussion: While the current evidence suggests that the change in the prevention paradigm has not been applied universally, the American Academy of Pediatric Dentistry (AAPD) recognizes that the protocols for evaluation and management of the risk of caries may assist doctors/dentists with respect to treatment decisions.

Conclusions: The (CAMBRA) protocol allows dentists to carry out treatment based on clinical evidence and by analyzing each patient's individual risk factors. The risk assessment and the emphasis placed on the disease's entire process and not only on the progression of the cavitated lesion, make CAMBRA a different and innovative approach in comparison with the traditional approach of restorative treatment in dental caries.

9. RISK FACTORS IN EARLY CHILDHOOD CARIES: AN EXPERIMENTAL STUDY

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Introduction: Early childhood caries is a great concern among parents when it comes to the care of their children. These lesions may be associated with pain, malaise, premature loss of primary teeth, malnutrition and the fear of eating,

with consequences for the development and growth of the child, and leading to, in extreme cases, hospitalization.

Several associated risk factors have been described. However, there isn't a uniform approach to the highest influence some of these may have on the appearance of cariogenic lesions associated with a specific child profile.

Objectives: The objective of this study is to analyze the etiological factors in Early Childhood Caries in child patients between 1 and 4 years of age, by analyzing the DFT (Decayed Filled Teeth) and comparing between them the associated risk factors and social contexts.

Materials and methods: The study was conducted on a sample of 168 children, who attend the private dental clinic for dental checks (1 to 4 years of age). The diagnostic protocol for said caries was carried out by means of a series of periapical radiographs and clinical examination protocol. We studied the existence of potentially associated factors; 1) frequency of brushing; 2) socio-economic factors; 3) frequency of visits to the dentist; 4) being breastfed or bottle-fed and duration; 5) sugar intake and frequency; 6) type of snacks consumed; 7) number of caries per individual. A statistical analysis of the results was carried out, by calculating the means and standard deviations. Additionally, we carried out an inferential analysis by binary logistic regression to determine the influence of each of these factors on the emergence of early caries. A value of $p < .05$ was considered statistically significant.

Results: The results of the study show the existence of early caries in 30% of the target population (168/56). The observed DFT index was 2.19. Among the individuals studied: 171 caries were caused by sugar intake, 74 were caused by bottle feeding, 5 were caused by honey being applied to pacifiers, 5 were caused by use of inhalers in asthmatic patients, and 103 were caused by breastfeeding on demand.

Conclusions: 87% of children over 9 months of age breastfeeding on demand and demonstrating poor hygiene presented caries. Therefore, we conclude that there is a greater cariogenic potential in these individuals, and that bottle feeding offers a greater control of feedings. Moreover, a sugar-rich diet is the main risk factor.

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10. PREDISPOSING FACTORS IN THE EMERGENCE OF GINGIVAL HYPERPLASIA ASSOCIATED TO FIXED ORTHODONTIC APPLIANCES IN CHILDREN AND ADOLESCENTS

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Introduction: Gingival hyperplasia is a disease of the periodontal tissues, characterized by the increase in the size of the gums and the formation of artificial sacs. It represents

an exaggerated response to a variety of conditions, such as orthodontic appliances.

Due to the frequency in which orthodontics are applied and that most of these therapies are performed in adolescents, the age in which they are more reluctant to treatment and less attentive to oral hygiene measures, the clarification of the factors responsible for the disease must be a priority.

Objective: To review the literature on the link between fixed orthodontic treatment and the formation of Gingival Hyperplasia.

Methods: The following databases were reviewed: PubMed, Web of Science, EbscoHost, Scielo and Google Scholar, with a search of the following keywords: "gingival hyperplasia", "orthodontic", "brackets" and "pediatric periodontics".

The articles included were full-text, published between 2005 and 2015, in English or Spanish, and published in high-impact journals dealing with children and adolescents.

Results: The various articles analyzed have reported that gingival hyperplasia is a common condition during treatment with fixed orthodontics. While adolescence is the ideal time for orthodontic treatment, patients develop a greater number of lesions, the highest prevalence being at this stage. Another important causal agent that promotes their development is the presence of poor oral hygiene.

The elements that appliances are made of should be taken into account. Currently, there is controversy regarding the type of brackets that cause a greater accumulation of plaque; some studies found higher levels of plaque in the self-ligating brackets, while others found better results within these parameters.

Another element to consider is the ligature in conventional brackets, as the elastic kind is more likely to accumulate plaque than the wire kind.

Finally, a factor that depends on the dentist is avoiding excess resin around the bracket, as this excess creates rough surfaces close to the gingival margin, thus producing an increase in the accumulation of plaque with subsequent inflammation of the gingival tissue.

Conclusions: Orthodontic treatment may lead to the alteration of the gingival tissue, resulting in gingival hyperplasia.

The age and oral hygiene of the patient must be considered.

The type of orthodontic elements used and excess resin may predispose this pathology.

11. ACUTE HERPETIC GINGIVOSTOMATITIS. A CASE REPORT

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Introduction: Primary herpetic gingivostomatitis is the most common infection caused by the herpes simplex type 1

virus, characterized by ulcerative lesions in the oral mucosa and gums and is frequently accompanied by perioral vesicles. It is very common in children, with the highest prevalence in the age group between 6 months and 5 years of age. Herpes simplex type 1 virus transmission occurs by direct contact with infected lesions or saliva from symptomatic or asymptomatic individuals with primary infection or recurrent herpes simplex virus infection.

Objective: This work aims to present a case of acute herpetic gingivostomatitis, in order to better understand its clinical manifestations and establish the correct differential diagnosis.

Case report: A 3-year-old girl with clinical signs of acute herpetic gingivostomatitis.

At the time of consultation, the girl presented diffuse ulcers in the gingival mucosa and on the tongue. The signs and symptoms presented were fever, general malaise, difficulty eating, and a great deal of pain.

Comments: Herpetic gingivostomatitis has an average incubation period of 7 days and transmissibility lasts at least one week. In this disease, there might be fever, sometimes high, rejection of food, foul breath, dysphagia, hypersalivation, regional lymphadenopathy, vesicles that progress towards mouth and throat ulcers, and perioral vesicular skin lesions. Aphthous lesions are usually located on the lips, gums, the anterior portion of the tongue, and the hard palate.

The symptoms of acute herpetic gingivostomatitis persist for about two weeks. In the acute phase, patients feel a great discomfort, manifested by a great irritability in children. Occasionally, there is a complete refusal to drink fluids, with the consequent dehydration. The treatment is symptomatic in order to prevent dehydration. According to some authors, antiviral therapy with acyclovir should be considered in the early stages of the disease, although it is useful in reducing oral manifestations and eliminating the virus.

A differential diagnosis is very important; the dentist should be familiar with the disease, as symptoms are typically oral, and the patient may benefit from early diagnosis.

Conclusion: The ease of transmission of this disease justifies the search for scientific improvement. A correct diagnosis is essential so that we may reduce morbidity and even prevent hospitalizations in some cases.

12. THE PRESENCE OF ORAL CANDIDIASIS IN CHILDREN AND ADOLESCENTS WHO WEAR ORTHODONTIC APPLIANCES

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Introduction: Oral candidiasis is a very common and important disease in the oral cavity, caused by any of the

species of the genus *Candida*. Between 30% and 60% of the population are carriers of *Candida* in the oral flora.

The trauma caused by a removable orthodontic appliance, coupled with an anaerobic and acid environment in the contact surface of the appliance, reduces resistance to *Candida* infections. It is important to be kept up-to-date on how orthodontic appliances affect the oral cavity in the presence of *Candida* and how this may lead to disease.

Objective: To conduct an updated review on the literature on the adherence of *Candida* in children and adolescents who are undergoing orthodontic treatment with fixed and removable appliances.

Material and methods: The following databases were consulted: PubMed, Scielo, Google Scholar, EBSCOhost, and Web of Science, with the use of the following keywords: “orthodontic appliances”, “orthodontics”, “candidiasis”, “candida albicans” and “oral thrush”. Articles published between 2006 and 2016, which contained the search terms in the titles or abstracts, published in high-impact journals were included, excluding the articles that did not contribute to the achievement of the objectives.

Results: The articles analyzed have shown that orthodontic appliances may alter the count of *Candida albicans* during treatment, observing an increased colonization of *Candida* in patients with fixed orthodontic appliances in comparison with the removable kind.

Several authors indicate that a sharp decrease of the salivary pH takes place in the presence of braces, both fixed and removable, determining that there is a direct link between their presence, *Candida* and low salivary pH levels.

With respect to the design, there is a greater adherence of *Candida* in appliances with screws and acrylic division.

Oral hygiene is one of the most important factors which may be associated with the prevalence of *Candida* in the oral cavity.

Conclusions:

1. Fixed and removable orthodontic appliances favor the colonization of fungi.
2. There is a direct link between the presence of orthodontic appliances, *Candida*, and low levels of pH.
3. Patients undergoing orthodontic treatment and their dentists must maintain an exhaustive control of hygiene and prevent oral candidiasis.
4. Susceptible attachments that may hamper oral hygiene should be minimized through a better design of appliances.

13. EOSINOPHILIC ULCER OF THE TONGUE IN AN 8-YEAR-OLD BOY

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Introduction: The eosinophilic ulcer of the oral mucosa consists of an ulcerative lesion of persistent evolution that

occurs most of the time on the ventral surface of the tongue, but also in other locations, in relation to self-induced trauma, and which poses diagnostic problems. Its occurrence in children is called Riga-Fede disease and affects very young children in relation to neonatal teeth.

Objective: To present a case of eosinophilic ulcer of the tongue, which is unusual considering the patient's age, and demonstrate the effectiveness of communication tools between specialists.

Case report: An 8-year-old patient who visits his pediatrician due to a recurrent ulcer of the tongue he has had for several months in the same location on the ventral surface of the tongue. The area is swabbed, and infectious etiology is discarded. A blood test is carried out, which reveals a mild leukopenia. A month later, the leukopenia has improved, but the ulcer is still present, which is why a consultation is scheduled with Dermatology. The specialist diagnoses Riga-Fede ulcer secondary to self-induced trauma and refers the patient to his dentist. He notes that the ulcer has already healed, but that the mucosa of the tongue presents a clear line of imprint of the maxillary incisors, attributable to the habit of interposition and biting of the tongue, and confirms the diagnosis of eosinophilic ulcer of the tongue (Riga-Fede disease of the pediatric variety).

Comments: The emergence of a persistent ulcer of the tongue always creates concern for its possible link to various benign and malignant oral disorders. Almost all of the authors agree on the importance of understanding this condition so as to provide a diagnosis based on the history and clinical features and thus rule out more worrisome conditions, such as agranulocytosis, immune disorders or infections of varying degrees.

Conclusions: We find it very important to maintain good communication channels among specialists. In this case, sending the photograph of the injury to the specialist in dermatology via the intranet, allowed a good diagnostic orientation. Likewise, the communication and referral to the dentist allowed us to determine the origin of the self-induced trauma and confirm the diagnosis.

ORTHODONTICS

14. APPROVAL OF THE PROFILE CHANGE IN PATIENTS WITH MAXILLARY TRACTION AND MANDIBULAR ADVANCEMENT TREATMENT

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Introduction: In the studies of children preparing for orthodontic treatment, the concerns and expectations of patients and parents regarding the cosmetic improvement of facial fea-

tures are recurrent; the most common reasons for orthodontic treatment concern the dentist, the parents and the discontent of the children themselves with their appearance.

Do patients undergoing orthodontic treatment really increase their self-esteem by enhancing their appearance? According to studies, the first motivating factor for orthodontic treatment in the population is the desire to improve their dental features followed by facial appearance. In the case of orthopedic treatment, the most notorious changes occur in profile changes caused by the traction of the maxillary or mandibular advancement.

General objectives: To analyze what improvement in appearance is considered by the patients who are undergoing maxillary traction or mandibular advancement treatment, attending the Master's Degree in Dentistry at the University Dental Clinic of the Universidad Europea de Madrid. *Specific Objectives:* a) to analyze the change in the perception of appearance according to the profile of the patient in comparison with the changes caused by their own treatment; and b) to consider the different perceptions of "improvement in appearance" in patients undergoing the same treatment (maxillary traction / mandibular advancement).

Materials and methods: The sample was composed of patients undergoing orthopedic treatment at the University Dental Clinic of the Universidad Europea de Madrid, between 8 and 12 years of age, which are currently being treated or were treated (for at least 6 months) with maxillary traction or mandibular advancement. The two groups were divided and a sequence of before and after treatment photos were shown, after which the patients selected which in their opinion was their most harmonious profile and that of the other patients undergoing the same treatment.

Results: Ten patients were surveyed, six of whom received maxillary traction and mandibular advancement treatment. They chose as the more harmonious profile the after treatment photo in 100% of the cases.

Conclusion: One hundred per cent of the patients were very satisfied with the changes in their facial appearance; however, 50% was not satisfied with the changes presented in the other patients undergoing the same treatment in the case of mandibular advancement and 33% in the case of maxillary traction.

15. TELL ME WHAT SIDE YOU CHEW ON, AND I WILL TELL YOU HOW YOU CHEW

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Introduction: The study of mandibular movements has always been an objective in dentistry. For a very long time, there have been attempts to track these movements through the use different procedures: electromechanical, optometric and magnetographic, among others. The kinesiograph com-

bines all three methods to study the masticatory function in all three planes of space, as well as the muscular and biological limitations of each case in particular.

Objectives: To assess through the use of the kinesiograph, how posterior Planas Direct Tracks influence masticatory cycles in a patient with a unilateral masticatory pattern and overbite, and thus establish a subroutine in the Central Nervous System which, ultimately, corrects the occlusion matching the Masticatory Functional Angle (MFA) of Planas.

Case report: Through the use of the Keynetkinesiograph, three quantitative variables were evaluated in different planes. On the vertical plane, we assessed the maximum aperture; on the transversal plane, the maximum lateral displacement and the maximum amplitude of the masticatory cycle; and on the sagittal plane, the maximum mandibular retrusion. Finally, we included two qualitative variables to analyze masticatory cycles according to the preferred chewing side, before and after the placement of posterior tracks to treat the patient's overbite.

Comments: The graphs drawn for each of the mandibular movements without the placement of tracks was characterized by the presence of one preferred chewing side with a MFA of 25° vs. 70° and limitations in the lateralities caused by the overbite. After the placement of tracks in a Class III patient, we observed that the masticatory cycles were the normal ellipse described by Okeson et al., and the number of finished cycles on the left and right were equaled and increased in number.

Conclusions: By tracking the masticatory cycles, we are able to assess changes produced in the same after the placement of posterior Planas Direct Tracks, determining that it is possible, with their placement, to directly influence occlusion, modifying it in a predictable and controlled manner, acting directly on the number of masticatory cycles per bolus and on the stimulation of the lateral pterygoid, which stimulates the growth of the child's lower anterior facial height. As this is a case report, we are unable to show any statistically significant results; however, it is evident that it is possible for the posterior direct tracks to directly modify the paratype, thus activating a cascade of stimuli in the central nervous system that helps to stabilize the occlusion, and stimulates muscle and bone development.

16. EXTREME MALPOSITION OF TEETH: PRESENTATION OF A CASE

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Introduction: Dental anomalies are defined as a deviation from the norm, caused by an alteration in the embryological development of teeth. The anomaly may affect their shape, size, number, color, and position.

Most of the dental alterations occur between the sixth and eighth week of intrauterine life, and the causes may be genetic or environmental.

The genes responsible for the histogenesis and the genes that regulate the morphogenesis, which are also involved in the determination of the position, have been established.

Objective: To describe a clinical case of extreme malposition of the primary lower second molars and its treatment.

Case report: Four-year-old male who arrived to the consultation at the Pediatric Dentistry unit of the UV because his primary second molars had not erupted.

The patient is diagnosed with apparently balanced reciprocal chromosomal translocation *de novo* with karyotype: 46XY, t(8;9)(q24;q31), and a slight delay in growth and no other features.

Molars 7.5 and 8.5 are clinically absent, but agenesis is ruled out based on the radiograph.

At age 6, a bilateral and symmetrical lump is detected in the edentulous space of the primary lower molar on a vestibular level, which is radiographically confirmed to be the root apices of the primary second molars.

After a CT scan is carried out, we decide to perform the surgical removal of these molars, due to the impossibility of normal eruption and potential complications.

The patient is currently being treated with interceptive orthodontics.

Comments: The symmetry of the malposition of the patient's 7.5 and 8.5 was striking, thus coinciding with the diagnosis of a translocation between chromosomes 8 and 9.

The cytogenetic report specifies that the translocation in principle does not involve any pathology but does not rule out small genetic changes due to this disturbance.

Some authors point out that in apparently balanced translocations there are small losses or gains in genetic material in the chromosomal breakpoint, which may produce different changes and anomalies, on a systemic and local level.

On the other hand, research is currently being conducted on the genetic influence that exists in dental disturbances, which singles out homeobox genes as responsible for regulating the normal development of the tooth germ.

Conclusions: The case presented provides a genetic study carried out for other reasons, which supports the genetic etiology of the diagnosed dental disturbance.

Pediatric dentists must be familiar with up-to-date knowledge in this respect when establishing an etiologic diagnosis of dental anomalies.

17. THE LINK BETWEEN PILLOWS AND THE UNILATERAL POSTERIOR CROSSBITE

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Introduction: Within the etiology of malocclusions, we find the influence of extrinsic pressure habits from abnormal

position when sleeping, which may produce alterations to bone and teeth.

There are several positions that are assumed when sleeping, which, when sustained over time, may cause a lateral compression on the upper jaw, thus causing slower growth in width towards the supporting side and a deviation of the mandible towards the same. This results in a narrower maxilla and a larger mandible, where the lower posterior teeth overlap the upper teeth, creating a *unilateral posterior crossbite* (UPC).

General objectives: To analyze the link between positioning on pillows and unilateral posterior crossbites in a group of children seeking treatment at the Master's Degree program for Pediatric Dentistry of the Universidad Europea de Madrid. **Specific Objectives:** a) to analyze the most frequent type of UPC in the population of selected patients; b) to link the side of the crossbite with the position the child sleeps in, and the kind of support this presents; and c) to study the position and the type of support that most often occurs when sleeping, in the sample selected.

Material and methods: We selected patients between 6 and 12 years of age, who sought treatment at the Master's Degree program for Pediatric Dentistry of the Universidad Europea de Madrid between February and May 2016. In the clinical examination, we assessed the presence of posterior crossbite according to the classification proposed by Locks et al. in 2008. Additionally, we requested that parents fill out a survey on how and which side their children slept on for seven nights. We also encouraged them to take photos.

Results: We studied 30 patients with UPC, 20 of which presented functional UPC (67%) and 10 presented dental UPC (33%). Thirty-two percent of the patients presented a UPC that coincided with the dominant side when sleeping, the most common one being a right-side UPC, with 25% being a right lateral prone position, and a left-side UPC, with 5% being a left lateral prone position. Moreover, the most common type of support was hand on the pillow at 45%.

Conclusion: We conclude that although a link was found between the presence of UPC and sleeping positions, we agree with other authors that the etiology of malocclusion is too complex and multifactorial to claim that this habit is the single etiologic factor, as it may be linked to other para-functional habits, such as thumb sucking, lip sucking, tongue interposition, and mouth breathing, which may or may not be present and also an influence.

18. SUBMUCOSAL VS. EXTRAMUCOSAL TRACTION FOR THE ORTHODONTIC-SURGICAL TREATMENT OF IMPACTED CANINES

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Introduction: Palatally impacted maxillary canines have been reported over the years. Premature detection in patients

no more than 10 years of age and early corrective measures are essential to reduce the risk of complications and avoid more invasive treatments (Ericson and Kurol, 1987). In an age range between 10 and 13 years of age, the treatment of choice would be the extraction of the primary canine and the expansion of the dental arch. In the case of late diagnoses, simple interceptive procedures would not be sufficient; we would have to combine orthodontic-surgical treatments to solve the embedded teeth. Orthodontic-surgical treatment can be carried out through the use of two different techniques: submucosal traction or extramucosal traction.

Objective: To conduct a review to find out which technique provides greater benefit to the patient in terms of duration of the surgical intervention, as well as the duration of the orthodontic treatment and periodontal considerations.

Materials and methods: The systematic review was carried out following the SORT criteria for scientific evidence. The search was conducted during the months of March and April (2015). The databases used were: PubMed-MEDLINE, Cochrane Library, and Scopus. The inclusion criteria for our search were limited to those articles published in English, in the area of dentistry from 2005 to the current date in relation to human cases.

Results: After analyzing the three databases, we grouped the articles according to the level of scientific evidence (SORT criteria) and eliminated those that were duplicated. A total of 23 articles were classified following the SORT criteria, 5 of which were level 1, 8 were level 2, and 10 articles were level 3. Finally, level 3 articles were excluded.

Conclusion: It can be concluded, after having completed this review, that there is no evidence to support one particular traction technique in the orthodontic-surgical treatment of impacted canines.

SURGERY. CARIES

19. INTERNAL BLEACHING OF PRIMARY TEETH

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Introduction: At present, dental injuries are the leading cause of coronal discoloration and, as a consequence, the second reason for seeking treatment in pediatric dentistry.

The change in tooth coloring, produced by a traumatic injury, is a cosmetic problem for the patient, especially when it affects the front teeth.

Intrinsic coronal alterations in color have numerous causes. The most common is pulp bleeding, where a red-pink color is seen, caused by the rupture of blood vessels and capillaries. When the aggression exceeds the limits of resistance of the tooth, the pulp tissue experiences a degradation process

that leads to pulp necrosis, which produces disintegration, the product of which enters the dentinal tubules and darkens the dentine, turning it yellow-brown. Finally, with the presence of ferrous sulfide-forming bacteria, the staining becomes more intense, darkening to dark brown or black.

Objectives: The objective of this work is to present a sequence of clinical cases of patients who have undergone internal bleaching, as a conservative and effective therapeutic alternative for discolored teeth.

Case report: We prepared an action protocol to carry out internal bleaching in primary teeth that had suffered prior trauma and as a result presented changes in coronal color.

The results obtained are presented after the completion of said treatment in the upper central incisors in patients between 4 and 5 years of age, who presented intrinsic changes in coronal coloration after suffering dental trauma.

Comments: At present, in our society, appearance is not only important for adults. Children also worry about their physical appearance, and a deviation from what is considered the norm, such as a change in the color of their teeth, may give rise to big complexes or rejection.

Dental color alterations may be solved through restorations, veneers, prefabricated crowns or, as in our case, though the use of an internal bleaching of the crown, which is a more conservative choice.

Conclusions: Internal bleaching in primary dentition represents a successful treatment, both clinically and for the family, as it provides a high degree of satisfaction for both patients and their caregivers.

20. THE EFFECT OF A GLASS IONOMER VARNISH (CLINPRO™ XT VARNISH) ON BOND STRENGTH OF A UNIVERSAL ADHESIVE (FUTURABOND® NR)

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Introduction: The use of fluoride varnishes for preventing tooth decay in high risk children is becoming increasingly common. The adhesion to enamel treated with these products has not been sufficiently studied. Clinpro™ XT Varnish is a fluoride releasing glass ionomer varnish that has been recommended for preventing demineralization and for favoring remineralization of the enamel in risky situations.

Objectives: To determine how a resin-modified glass ionomer varnish (Clinpro™ XT Varnish) 7 days after application affects the resistance of shear bond strength of a self-etching adhesive in intact bovine enamel and in demineralized bovine enamel.

Materials and methods: 120 lower primary bovine incisors were used. The teeth were randomly divided into 6 groups. Group 1: intact enamel surface. Group 2: demineralized enamel. Group 3: demineralized enamel treated with glass ionomer varnish for 7 days. Group 4: intact enamel treat-

ed with varnish for 7 days and roughened. Group 5: demineralized enamel treated with varnish for 7 days. Group 6: demineralized enamel treated with varnish for 7 days and roughened. We used the self-etching adhesive Futurabond® NR and the nano-hybrid universal composite Grandio in 2 mm layers. These were sheer-tested 24 hours after adhesion. The results were noted in Newton, passed to Mpa, and divided by the adhesion area.

Results: The resistance results of shear bond strength according to group were: group 1: 7.95 ± 3.86 ; group 2: 5.25 ± 2.83 ; group 3: 13.92 ± 8.44 ; group 4: 18.76 ± 6.54 ; group 5: 14.83 ± 6.57 ; group 6: 12.14 ± 4.15 . We found a greater strength of adhesion in the groups treated with Clinpro™ XT Varnish in both the intact enamel as well as the demineralized enamel. Although the difference was not significant, the roughening did condition different behavior in the intact enamel to the demineralized enamel.

Conclusions: The use of a varnish (Clinpro™ XT Varnish) improves the adhesion to intact and demineralized enamel of self-etching adhesives such as Futurabond®NR.

21. BITE RAMPS IN PEDIATRIC DENTISTRY: TREATMENT OF A CASE OF ANTERIOR CROSSBITE

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Introduction: An anterior crossbite is the malocclusion resulting from the palatal inclination of the upper incisors in relation to the lower incisors. Anterior crossbites have an incidence of 4% to 5%, the diagnosis being of utmost importance during the mixed dentition. This type of malocclusion has a multifactorial etiology: it may be the result of the eruption of the maxillary incisors with more palatal positioning; a traumatic injury to the primary incisors resulting in the lingual movement of the permanent teeth germs; the presence of supernumerary teeth in the anterior region; odontoma; a dental arch of the wrong size; and upper lip biting habit, among others. For the treatment of this malocclusion, there are several options, including: inverted crowns, fixed /removable / functional appliances and composite ramps. The treatment for this type of malocclusion with the use of composite ramps will be addressed in this poster. Composite ramps achieve a lengthening of the crown through the use of composite so that the lower teeth are forced to occlude on the palatal aspect of the antagonistic teeth, thus keeping them ortho positioned. It has the advantage of being a fast, safe, inexpensive, non-invasive procedure, devoid of functional / cosmetic changes, which eliminates discomfort for the patient due to the number of hourly sessions. Additionally, when treatment is completed, the composite ramps are easily removed without causing damage to the enamel. However, the ramps are susceptible to fracture due to their low level of resistance.

Objective: The anterior crossbite is considered one of the greatest concerns for parents regarding their children due to the cosmetic and functional factor.

Case report: L. M. Eight-year-old female arrived for a pediatric dentistry consultation for cosmetic reasons, says that she has, “a tooth turning inward”. She says she does not suffer from allergies nor systemic diseases, and does not take any medicine.

Comment: After comparing different treatment alternatives, composite ramps or tracks arise as the alternative that is faster, easier to carry out and more economical. Children, especially the younger ones, adjust better to this type of treatment than to those involving impressions and more time in the dentist’s chair.

Conclusion: The treatment of anterior crossbites must be carried out soon after diagnosis in order to prevent mobility, periodontal disease, and the fracture of the anterior teeth. Additionally, it may cause a malfunction of the temporomandibular joint.

22. DIRECT CAPPING MATERIALS FOR YOUNG PERMANENT TEETH: CURRENT TREATMENTS

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Introduction/Justification: Direct pulp capping in young permanent teeth seeks to preserve the vitality of the pulp, which is essential in these teeth in order to achieve full root development.

The aim is to promote the formation of a reparative dentine bridge, while striving to avoid any toxicity to the pulp. Several techniques have been described in the literature. Bioactive materials have currently appeared with the goal of supporting the repair of the pulp.

There is no unanimity in the scientific community regarding the material of choice for this procedure, which is why we sought to conduct a review of the materials that would currently be the most suitable for direct pulp capping in immature permanent teeth.

Objectives: To review and assess current treatment alternatives in direct pulp capping in immature permanent teeth.

Material and method: We conducted a review of the literature in the following biomedical databases: PubMed, Medline (EBSCO). Keywords: *direct pulp capping, immature tooth, open apex.*

Results and analysis: Calcium hydroxide has been used the most for pulp capping. However, it has been shown that the dentine bridge formed is of low quality and does not have the ability to adhere to the dentine, which may result in the failure of the technique.

In the 90s, MTA[®] (Mineral Trioxide Aggregate) appeared as an alternative to calcium hydroxide, because it induced the

formation of reparative dentine of higher quality when used in direct pulp capping.

Recently, a new product based on calcium silicate (Ca₃SiO₃) called Biodentine[™] was introduced in the market. This material possesses mechanical properties that are similar to those of healthy dentine, and is thus able to replace it on a coronal and root level.

Some studies have shown that Biodentine[™] possesses better physical properties and a quicker setting time than MTA[®] and Portland cement. Additionally, it is capable of inducing odontoblast differentiation, thus stimulating the formation of reparative dentine. Compared to other cements based on calcium silicate, such as MTA[®], it suffers no color change when exposed to light, as it does not contain bismuth oxide.

Conclusions: After reviewing the literature on various bioactive materials, Biodentine[™] appears to be a good alternative for pulp capping in young permanent teeth. However, more long-term studies are required to corroborate the results obtained so far with this material.

23. NEW MATERIALS AND WAYS TO TREAT PERMANENT TEETH WITH AN IMMATURE APEX AND PULP NECROSIS: CURRENT STATE

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Introduction: The treatment of nonvital pulp is indicated in teeth with open apices and thin dentinal walls, in which it is not possible, with the use of classical instrumentation, to create an apical stop to provide an effective filling of the root canal. The evidence in this area focuses on preserving the dental pulp stem cells, as well as the mesenchymal stem cells of the apical papilla, thus achieving revascularization and complete root maturation. This technique, called ‘maturogenesis’, is believed to have the ability to replace the classical apexification techniques. In the same manner, the use of platelet-rich fibrin (PRGF) seems to give rise to the idea of tissue regeneration in dental trauma.

Objectives: a) to compare the results in terms of hermetic seal and functionality of the tooth, of the maturogenesis and PRGF techniques with other classic materials; and b) to determine the clinical survival of necrotic teeth with the techniques of maturogenesis and PRGF.

Material and methods: A systematized and evaluative review of the literature was conducted, with quantitative and qualitative data, which sought to compare and determine which material best met the aim of hermetic sealing, allowing us to preserve the tooth and its functionality. Reviews of the literature and clinical cases in articles indexed no earlier than 2012 and no later than November 2015 were accepted as sources of information, with the following keywords: *apexification, apical barrier, platelet rich fibrin, mineral trioxide aggregate, regenerative endodontics, pulpal revascularization, stem cells, calcium hydroxide, non vital immature.*

Results: Calcium hydroxide is a material of good adaptation, apical sealing and low cost, but which presents excessive permeability and is difficult to handle in humid environments. This is why MTA as a material is useful in the formation of apical barriers that are more solid and durable, thus obtaining better results and better clinical survival of 5 to 10 years. The new materials, biostimulators or with regenerative capacity, improve results in up to 55% of cases, thus decreasing the application technique, responding to a minimally invasive dentistry, and because they are 100% biocompatible, providing a better functionality in up to 32% of cases in comparison to the classic materials.

Conclusions:

1. MTA is the most widely used classic material and provides the best properties of biocompatibility, bacteriostatic and hermetic seal.
2. Calcium hydroxide provides an uncertain prognosis due to its excessive permeability.
3. The bioactive materials present the best functional properties in apical sealing and regeneration capacity.
4. More long term research is required to systematize the use of biomaterials.

24. LONG TERM PERMANENCE OF THE PRIMARY 2ND MOLAR IN SUBJECTS WITH MANDIBULAR 2ND PREMOLAR AGENESIS

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Introduction: Starting from their intrauterine formation, primary teeth complete their development and their rhizolysis in approximately 8 years. The resorption pattern may be altered by the absence of the permanent successor tooth. In Spain, the prevalence of agenesis is 6%, the most affected teeth being the lower 2nd premolar, the upper lateral incisor and upper 2nd premolar (excluding wisdom teeth).

Material and method: This paper examines the prevalence, distribution, degree of root resorption and age of permanence in mouth of primary second molars with agenesis of the permanent successor, in a population of 95 subjects, between 6 and 80 years of age. For this purpose, we studied panoramic radiographies belonging to the UAX University Clinic database. In order to see the degree of root resorption, we followed the classification of Moorrees CF. (1963).

Results: We found 129 primary second molars with agenesis of the successor, in 58.14% of the cases in females and 41.86% in males. Of the 95 individuals, one third presented bilateral agenesis. Only 14% of the primary molars were in infraocclusion. There is no statistically significant difference in relation to the frequency of agenesis of the permanent right and left second premolar ($p < 0.05$). The lowest degree of root resorption appeared in the 6-10 age group, increasing reabsorption progressively with age. The age range where root resorption occurs more frequently is from 11 to 20 years

of age. Twenty-one per cent of the individuals in the sample retained the primary second molar for more than 15 years in the mouth; and of these, 25% had intact roots without reabsorption. We found 5.25% of the individuals > 30 years of age with the primary second molar in the mouth, with some degree of resorption without this being complete. Twenty per cent of the molars showed conservative dental treatment. There is no significant link between the degree of root resorption and the presence of dental treatment.

Conclusions: Early diagnosis is essential for the survival of primary teeth with agenesis of the permanent successor. It cannot be concluded, with the data obtained, that the causes of root resorption in subjects over 40 years of age are genetic, or due to dental treatment carried out in these teeth, or conversely, that the absence of conservative dental treatment increases their permanence in the mouth. Based on the study sample, it cannot be concluded that there are no individuals older than 40 years of age with primary second molars in their mouths.

25. ORAL REHABILITATION OF ANTERIOR TEETH IN PEDIATRIC PATIENTS

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Introduction: One of the biggest challenges for the pediatric dentist is the cosmetic and rehabilitative treatment of babies who have suffered the loss of a large amount of surface in the anterior teeth, as a result of early childhood caries or trauma.

Case report: Treatment of three children younger than 24 months of age with very little sound structure remaining in the primary anterior teeth carried out by placing fiberglass posts and acetate crown with composite. Clinical and radiographic evolution of the treatment.

Discussion: In the literature, several methods have been described for the restoration of very ruined primary anterior teeth, but additional longitudinal clinical studies are needed to evaluate each technique.

Conclusions: The ideal rehabilitative treatment of a primary anterior tooth is the kind that accomplishes cosmetic success, restoring function and one that lasts until the exfoliation of the tooth. It must preferably be carried out quickly and easily repaired if necessary.

26. ORAL REHABILITATION OF A PATIENT WITH CARIES. A CASE WITH A 5-YEAR FOLLOW-UP

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Introduction: Young patients with Early Childhood Caries (ECC) commonly experience oral rehabilitation under general anesthesia (GA), due to difficulties in handling their behavior. Children with a history of ECC are highly susceptible to the development of new caries, even after complete oral rehabilitation.

Objectives: To demonstrate that after a surgery under general anesthesia, it is essential to carry out a rigorous protocol of reviews in which we apply prevention criteria so as to raise awareness among parents of the importance of hygiene and dietary changes, in order to reduce the new occurrence of caries.

Case report: Female patient, age 3 and 11 months, with ECC that was referred for treatment to the Department of Pediatric Dentistry of the Universitat Internacional de Catalunya. Due to the need for a comprehensive dental treatment, and because of difficulties managing behavior problems, her dentition was restored under GA. We used a combination of restoration methods and techniques, including the placement of composite resins, the restoration of preformed metal crowns, extractions, and space maintainers. The patient was followed for 69 months (5 years and 8 months), both clinically and radiologically.

Conclusion: This case reflects the need for providing support to children at a high risk of ECC, together with their families through the development of biological interventions and more acceptable and effective behavior in order to reduce the incidence of caries after oral rehabilitation under general anesthesia.

27. REPERCUSSIONS ON ADHESION OF CLINPRO® WHITE VARNISH ON DEMINERALIZED ENAMEL

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Introduction: Tooth decay continues being a big public health problem in developed countries that leads to a continuous loss of phosphate and calcium ions from the tooth structure in a process known as demineralization. In children with a moderate, high or extreme risk of suffering dental caries, prevention protocols include the use of fluoride varnishes that are aimed at preventing demineralization, or the remineralization of pre-existing lesions. The aim of the present study was to investigate adhesion to demineralized enamel treated with Clinpro® White Varnish fluoride varnish.

Material and methods: 120 bovine teeth were used that were randomly divided into 6 groups. Group 1: intact enamel; group 2: demineralized enamel; group 3: intact enamel treated with fluoride varnish for 7 days (Clinpro® White Varnish); group 4: intact enamel treated with fluoride varnish for 7 days and roughened; group 5: demineralized enamel treated with varnish for 7 days; group 6: demineralized enamel treated

with varnish for 7 days and roughened. We used the universal adhesive Futurabond® NR with the self-etching technique and Grandio® universal nanohybrid composite. A shear bonding strength test was carried out 24 hours after adhesion.

Results: Adhesion strength on demineralized enamel was lower than on normal enamel (5.13 ± 5.07 Mpa vs. 7.77 ± 3.97 Mpa; $p < 0.001$). A week after applying fluoride varnish on enamel with normal mineralization, bonding strength was identical to that of enamel without a fluoride varnish (8.18 ± 3.13 Mpa; 7.77 ± 3.97 Mpa; n/s). In the remineralized groups shear bond strength was similar to the demineralized enamel group (5.77 ± 3.79 Mpa; 4.59 ± 2.11 Mpa; n/s) and significantly lower to enamel with normal mineralization with or without varnish (7.77 ± 3.97 Mpa; 8.18 ± 3.13 Mpa). Significant increase to shear bond strength was found in the intact enamel group treated with varnish, in which the varnish was removed after 7 days (11.04 ± 5.55).

Conclusions: The use of Clinpro® White Varnish 7 days before a bonding process does not modify adhesion in either intact enamel or in demineralized enamel. If we want to increase adhesion of intact enamel, the varnish should be removed from the surface of the tooth.

28. ERUPTIVE AGE ASSESSMENT IN THE SECONDARY DENTITION WHEN THE PRIMARY PREDECESSOR IS LOST

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Introduction: Primary dentition is a fundamental element in a child's development and growth, which is why a premature loss of these teeth may affect not just the eruption of the permanent successor but also influence other areas, such as swallowing or phonation, in addition to spacing problems. According to the literature, when tooth loss occurs approximately three years before normal exfoliation, the eruption of the permanent tooth in question often occurs earlier, while if it occurs at a younger age it is often delayed.

Objective: The purpose of the study was to ratify the premise of early or delayed eruption of the permanent teeth, depending on the age in which the loss of the primary tooth occurred.

Methods: A total of 78 individuals, who underwent the extraction of the primary upper incisors, due to some type of trauma on said area, were incorporated into this study. In each case, we assessed the following: a) type of registered trauma; b) age in which the extraction was carried out; c) age in which the respective permanent upper incisors erupted; and d) degree of root formation prior to the extraction. The criteria for assessing the age of final eruption was the time in which the tooth/teeth made their appearance in the mouth.

A univariate statistical analysis was conducted with calculation of means and standard deviation. Additionally, the test of Chi-square was conducted for the assessment of the association between qualitative variables and the observed advancement of eruptive potential. A value of $p < .05$ was considered statistically significant.

Results: Once all of the data was analyzed, we were able to state that an eruptive advancement was observed in 70.5% of the patients who had to have at least one primary upper incisor prematurely removed.

Conclusions: A non-physiological loss of a primary tooth leads to an advancement in terms of the eruption of its corresponding permanent successor. Although eruption may come earlier, it is important to replace these losses with the use of substitution appliances that preserve the appearance and facilitate masticatory function and speech for the patient, but also prevent the appearance of harmful habits in the child.

29. ASSESSMENT OF THE SATISFACTION AND WELLBEING OF PATIENTS WITH REGARD TO PULPECTOMY TREATMENT VERSUS EXTRACTION AND SPACE MAINTAINER

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Introduction: Before any dental emergency with a traumatic origin, priorities should be established with regard to treatment. It is therefore necessary to take into account: the time remaining until exfoliation, the prognosis of the traumatized tooth as well as damage to the permanent tooth bud. When primary teeth suffer some type of traumatic injury, ideally the tooth will continue to have pulp vitality until shed, although if this is not the case, pulp treatment can be carried out without compromising function significantly or, as a last resort, the tooth can be extracted. But the best option should be chosen taking into consideration the integrity of the developing tooth germ.

Objective: The aim of this study was to determine the degree of satisfaction and wellbeing of the patient as well as the parent/tutor, after pulp treatment as a result of trauma versus extraction followed by the placement of a space maintainer. Aspects such as aesthetics, phonetics, mastication and social adaptation as well as cost/benefit quality were evaluated.

Material and methods: Seventy individuals, aged 2-5 years from a private dental clinic specialized in pediatric dentistry were invited to participate in a consecutive manner in the study. The medical history of all the participants was taken and they underwent a clinical and radiologic examination. They were diagnosed, treated and evaluated post-operatively after being monitored for 6 months. For the statistical analysis

the chi-squared test was used and the correlations were established using the Spearman coefficient ($p < 0.05$).

Results: The level of satisfaction regarding the space maintainer was high with regard to aesthetic appearance and phonetics, but average for mastication and financial cost. The change in color was the point that was negatively evaluated for the pulpectomies.

Conclusion: The primary dentition plays a decisive role in the development and growth of children. Following a traumatic tooth injury, therapeutic options are considered such as pulpectomies or extractions, although extraction obviously is the option in those cases in which periapical radiolucency and/or root resorption can cause damage to the permanent tooth. We should always keep in mind that the choice not only depends on the best treatment option but also on the decision of the parent or tutor.

BREASTFEEDING

30. RELATIONSHIP BETWEEN PACIFIERS AND BREASTFEEDING

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Introduction: Breastfeeding has become a subject of interest that should be addressed, as early abandonment is considered a public health problem. Although the American Academy of Pediatrics (AAP) recommends the use of pacifiers at bedtime as a means of reducing the risk of cot death, it is a non-nutritive habit that interferes with breastfeeding.

The literature indicates that breastfeeding should be started within the first hour of life and it should be maintained for 6 months minimum. It is recommended that pacifiers are offered after two weeks in order not to interfere with breastfeeding and premature weaning. The first two weeks of life of a baby are especially important and breastfeeding should be totally established before the introduction of a pacifier.

Objective: To find out if the use of a pacifier interferes with early weaning, as has been stated in the literature.

Material and method: A questionnaire that was handed into to nurseries and kindergartens in the municipality of Marco de Canaveses, in the city of Oporto, in Portugal that consisted of three sections and a total of 21 questions:

- 1st section – Characteristics of the mother.
- 2nd section – Characteristics of the baby.
- 3rd section – Breastfeeding/pacifier relationship

The results were obtained from 70 surveys (age range 22 to 44 years).

Results:

- Start of breastfeeding:
 - First hour of life: 66%.
 - Duration of breastfeeding

- Breastfed up to 5 months: 56%.
- Breastfed up to or after 6 months: 44%.
- Introduction of the pacifier:
 - Before two weeks: 73%.
 - After two weeks or never used pacifier: 27%.

When the results were analyzed, these showed that breastfeeding on its own decreased at 5 to 6 months of life. It was ascertained that the babies who had never used pacifiers breastfed for longer, including a baby that was breastfed for up to 23 months.

Conclusion: It was concluded that pacifier use before the first two weeks of life is one of the factors that could lead to early weaning.

ERUPTION DISTURBANCES, TRAUMATIC INJURIES, ORAL SURGERY, RADIOLOGICAL DIAGNOSIS

31. SEVERE DENTOALVEOLAR ANKYLOSIS; A CASE REPORT

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Introduction: Dentoalveolar ankylosis is a dental anomaly that causes a break in the continuity of the periodontal ligament, which leads to the alveolar bone fusing with the cement or dentine. This hinders the normal eruptive process and vertical bone growth of the ankylosed tooth, while adjacent teeth continue erupting and have normal alveolar growth. This situation leads to the affected tooth being below the occlusal plane, giving the impression of being submerged. Ankylosis is very common in the primary dentition while in the permanent dentition it is very difficult to find cases. The prevalence of ankylosis in the primary dentition is 1.3-8%. The etiology is unknown although there are predisposing factors. There are three types of ankylosis that can be found in a tooth.

- In *mild* ankylosis there is an absence of occlusion of less than 2 millimeters with regard to the occlusal level of the adjacent teeth.
- In *moderate* ankylosis the distance to the occlusion level is greater than 2 millimeters, but there continues to be interproximal contact with adjacent teeth.
- *Severe* ankylosis arises when contact is lost with adjacent teeth and the tooth may be submerged under the gingiva, and it may only be visible radiographically
- The choice between monitoring or treatment depends on the degree of ankylosis in the patient, the existence of the permanent tooth and its location, and the existence of premature loss of the space.

Objectives: Surgical extraction of the primary second molar to allow the correct positioning and eruption of the second molar.

Case report: Patient aged 5 years with all teeth erupted in the mouth with the exception of the upper right primary second molar. During anamnesis the mother could not recollect if the tooth had ever been present in the mouth. After performing an orthopantomography, agenesis was suspected of the permanent successor tooth and a periapical radiograph was necessary for the correct diagnosis. On radiographical evaluation, the second molar was found to be in an ectopic position, mesially tilted, and superimposed over the first molar. Tooth 65 in addition was destroyed by caries. Given this, and that severe ankylosis was modifying the eruption path of the successor tooth, a decision was taken to extract the ankylosed tooth surgically.

Conclusions: The early diagnosis and extraction of an ankylosed tooth can permit the repositioning of an ectopic tooth and its correct eruption.

32. ANKYLOSIS IN PRIMARY AND PERMANENT DENTITION

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Introduction: The cause of infraocclusion is frequently dentoalveolar ankylosis. The vertical growth of the affected tooth is inhibited and can be seen below the level of occlusion with respect to the neighboring teeth. Additionally, in the literature, the terms “submerged” and “infraoccluded” refer regularly to ankylosed teeth. The etiology of ankylosis is unknown, but it may be linked to a genetic cause, injury, bone growth deficiency, metabolic problems, premature eruption of the first permanent molar, agenesis of the permanent tooth (in the case of ankylosis in primary dentition), reimplant, auto-transplantation, localized infections, and chemical and thermal irritations.

Objectives: To analyze the frequency of ankylosis in primary and permanent dentition, in addition to identifying the tooth with the highest prevalence and the age and gender most affected by this pathology.

Materials and methods: The study was conducted on a sample of 500 children (between 6 and 16 years of age) who sought treatment at a private pediatric dental clinic from 2014 to 2015. The diagnosis was carried out by: clinical and radiographic assessment with a periapical series and orthopantomography (assessing the degree of infraocclusion, percussion, and state of the periodontal ligament).

Results: The results of the study show the existence of ankylosis in 4% of the population studied (20 cases out of 500 patients). The most affected teeth were the lower molars (in both the permanent and primary dentition). In the primary dentition, the teeth with a greater incidence of ankylosis were the lower second molars and in the permanent dentition, the most affected tooth was the permanent first molar. There is no significant prevalence regarding gender.

We observed a greater incidence in children between 6 and 8 years of age.

Conclusions: Therefore, it can be stated that infraocclusion is a rare occurrence, with no gender preference, and it occurs randomly in the left or right side, or bilaterally. Furthermore, it is observed more frequently in patients in the first phase of the mixed dentition.

33. MODERATE-SEVERE ANKYLOSIS OF PRIMARY MOLARS: ORAL IMPLICATIONS

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Introduction: Ankylosis of teeth refers to abnormal eruption due to the anatomic fusion of the alveolar bone and root cementum which leads to the disappearance of the periodontal ligament. This loss leads to the eruption of the affected tooth being blocked and the vertical growth of the ankylosed tooth being halted, while adjacent teeth continue to grow. The difference in height between them becomes increasingly noticeable, leading to the infraocclusion of the ankylosed tooth.

Objectives: To determine the implications for the successor and adjacent teeth in a group of patients with severe to moderate ankylosis.

Material and methods: A retrospective study was carried out on the medical records that involved ankylosed deciduous molars between 2010-2015. The age at diagnosis, gender, teeth affected, degree of infraocclusion was registered (grade I: with point of contact; grade II: beneath point of contact; grade III: beneath alveolar crest and grade IV: away from alveolar crest), and associated disturbances. Treatment carried out and progress.

Results: The sample was made up of 30 patients, the mean age was 8.4 years (range 6 – 14 years). The number of ankylosed molars was 54, and 40% of the patients studied had more than one ankylosed molar. The teeth that were most affected were 65 (28%) and 75 (19%). The severity of the infraocclusion was grade II in 41%; grade III 22%; grade IV 33% and less than 2% had grade I. Some 13% of cases had agenesis of the permanent successor. The mean age at treatment was 9.6 years. In 90% of cases the treatment was extraction of the ankylosed tooth followed by orthodontic treatment, and only in 10% was the ankylosed tooth solved by only extraction. Given the complexity of the treatment, 74% of the extractions were carried out under general anesthesia. In 93% of cases, secondary dental disturbances to ankylosis were registered, the most common being ectopic premolar in 64% of cases and mesialization of the first molar in 54%. In 27% of cases the successor tooth had to be extracted.

Conclusions: Moderate and severe infraocclusion leads to serious complications and because of this early diagnosis is important, as is establishing and planing the right therapeutic steps. Effective treatment is of primordial importance in order to avoid the condition evolving, which would lead to serious disturbances during the development of the child's dentition.

34. SLEEP BRUXISM IN CHILDREN. POSSIBLE PSYCHOSOMATIC DISORDERS IN CHILDREN AND ADOLESCENTS

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Introduction/Justification: Bruxism is a parafunctional activity that consists in the clenching or grinding of teeth. This may occur during sleep (parasomnias) or during the day, which is less normal. The consequences include temporomandibular disorders, muscle pain, periodontal problems, wear, sensitivity and loss of teeth.

The etiology is multifactorial and influenced by morphological and psychological factors. In addition, it has been linked to the immaturity of the masticatory neuromuscular system. More knowledge on its etiology is necessary due to its possible association with psychological disorders. The children using bruxism as a mechanism to liberate tension will have a high probability of the parafunctional habit continuing into adulthood, with serious damage to the oral cavity.

Objectives: To carry out an updated review of the literature on the relationship between child bruxism, anxiety and other psychological factors.

Materials and methods: A search of the literature was carried out in PubMed, EBSCOhost (Dentistry & Oral Sciences Source database) and Web of Science; using the keyword in the titles and abstract "bruxism", "children", "anxiety", "stress", "psychopathology", "psychol*". After filtering by publication date (2006-2016) 117 results were obtained out of which 19 were selected after the elimination of duplicates and after applying inclusion criteria: scientific articles, reviews or systematic reviews in Spanish or English that contributed to achieving the objectives. Articles on adults and case reports were excluded.

Results: Various authors have found an association between bruxism and psychological aspects such as anxiety, stress, depression and other emotional disorders, as well as behavioral disorders and antisocial behavior. In addition, bruxism has been related to personality characteristics such as tense personalities, high levels of neuroticism and high levels of responsibility.

High levels of sensitivity to anxiety (SA) have also been observed in children with bruxism. SA consists in fear of the symptoms of anxiety, and it is a stable variable over time with a strong hereditary component which has been put forward as a predisposing factor for psychiatric disorders.

Conclusions:

1. The important role of psychological factors has been observed in the development of child bruxism.
2. Sensitivity to anxiety can be a predisposing factor for the development of bruxism and psychiatric disorders.
3. Pediatric dentists should warn about the influence of emotional factors in child bruxism.
4. Psychological evaluation and treatment should help improve the health of these patients.

35. BRUXISM AND CHILD TEMPOROMANDIBULAR DYSFUNCTION: PREVALENCE AND CAUSES

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Introduction: Bruxism and temporomandibular dysfunction (TMD) are disorders that can arise during childhood and adolescence. The prevalence of bruxism in children is high although the wear on teeth is not decisive for the diagnosis, and it will sometimes arise in combination with oral or para-functional habits.

Objectives: The main objective of this study was to see the existence and prevalence of bruxism and TMD in child patients. The secondary objectives were to relate bruxism and TMD with the personality of the child, stress, oral habits and socioeconomic level.

Material and method: Patients between the ages of 3 and 12 years were gathered, who had primary or mixed dentition from the Faculty of Dentistry of the Universidad de Sevilla. Those with permanent dentition were excluded from the study, those with medical or psychological disorders, and those undergoing pharmacological treatment. A questionnaire was given to the parents of the children being studied which was based on validated tests for determining oral habits, socioeconomic level of the family, personality type and existence of stress.

The presence or absence of joint clicking was evaluated together with sensitivity to palpation of the joint, muscle pain and attrition of the permanent teeth. Descriptive and inferential statistics were carried out in order to determine the positive and negative association with the factors being valued and with child bruxism.

Results: The mean age of the patients was 7.5 years, 60% were girls and 40% were boys. The prevalence of bruxism was 23.33%, in patients with signs of TMJ this was 23.33% and those with bruxism and TMD it was 3.33% (50% of the sample had bruxism or TMD).

With regard to personality, 70% of the total sample showed traits of kindness, 10% responsibility, 10% intellect, 10% extroversion. The patients with bruxism showed 62.5% kindness traits, 25% responsibility and 12.5% intellect, and the patients with TMJ 87.5% kindness and 12.5% intellect.

With regard to socioeconomic level of the sample 23.33% was low, 36.67% average and 40% high. The socioeconomic level of patients with bruxism or TMD was low 26.67%, 40% average and 33.33% high.

Conclusions: The prevalence of children with bruxism or TMD is high, and it was more common in girls than in boys. Personality traits do not influence the development of bruxism or TMD. It is more common in patients with average socioeconomic level.

36. PRIMARY RETAINED CANINES. A CASE REPORT

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Introduction: A retained, embedded or impacted tooth is one that fails to erupt during the normal eruption time, because is totally or partially retained. One of the causes that can lead to this situation is odontomas.

- Permanent maxillary canine prevalence:
 - By race 1- 2% of the general population and in white or Caucasian race.
 - By sex more common in females 1 /1.3 and 1/ 3.
- Odontomas are benign odontogenic tumors made up of hard dental tissue such as enamel, dentine and cementum. The origin may be in a disturbance during odontogenesis. They represent 67% of the total.
- The WHO classifies them into compound or complex according to degree of development:
 - Compound: have all the hard dentinal tissue that is organized in a similar way to a tooth. These are the most common.
 - Complex: the dental components are less organized and there is no formation of structures like those of a tooth.

Objectives: To define this type of dental pathology, to determine and classify the cause in a case of ours, detailing incidence, prevalence, diagnosis and the treatment that should be carried out with regard to this clinical case.

Case report: A female patient presented at the hospital with an absent right primary canine. After carrying out the diagnosis and planning the most suitable treatment, we decided to extract an odontoma in order to allow the eruption of the compromised tooth. The oral examination revealed a bulge in the external cortical bone in the area of the missing tooth that was asymptomatic.

The radiographic examination confirmed the existence of missing tooth 53 that had not erupted and the presence of a radiolucent structure in the area, which was thought to be the cause of the retention.

The CAT scan indicated the approximate location of the radiolucent body. Outpatient surgery was planned and the odontoma was removed.

A sulcus incision was performed into the palate from 51 to 54 and the area of the odontoma was exposed. The fragments were extracted, three in total, and the area was sutured. A buttonhole incision was made by the incisor border of the canine in order to facilitate the eruption of the tooth. The fragments were sent for analysis and compound odontoma was confirmed.

Results: Two months later the patient attended for monitoring. The canine had started to erupt.

Conclusion: Impacted primary teeth are much more infrequent as normally only first and second molars are affected. There are only 10 impacted primary incisors described in literature revisions.

37. OROANTRAL COMMUNICATION IN A YOUNG PATIENT

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Introduction: An oroantral communication is an abnormal connection between the oral cavity and the maxillary sinus as a result of surgery, which generally cannot be avoided. The extraction of a permanent molars is the main cause, and it is justified by the proximity of the root apices with the maxillary sinus, particularly between the third and fourth decades in life. The participation of primary teeth in young patients seems to be an exceptional event.

Objectives: The objective of this study was to present a case report of oroantral communication after the extraction of a primary upper second molar with severe infraocclusion.

Case report: A young female aged 12 years with no general biological risk presented. Her medical and dental records were insignificant. The oral examination revealed mixed dentition and teeth 55, 65 and 75. The upper primary second molars had severe infraocclusion and no mobility. The radiographical examination revealed the presence of upper non-erupted second premolars. Tooth 65 was extracted and six months later a radiographical examination revealed the proper eruption of tooth 25. A later appointment was given for the complicated extraction of tooth 55 due to dental ankylosis and fracture of the palatal side of the root. A Valsalva maneuver revealed the presence of oroantral communication and the surgical wound was immediately closed with local suturing. Antibiotic and anti-inflammatory medication was prescribed and post-operative care was explained. Ten days after the intervention the oral musosa had healed favorably and there was no communication.

Conclusions: The extraction of ankylosed primary teeth, which is a common procedure in pediatric dentistry, may not be accident-free when there are anatomic variations. Having command of the surgical technique and the right intervention are essential to avoid complications.

38. MORPHOLOGICAL CONFIGURATIONS OF DENS EVAGINATUS

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Introduction: *Dens evaginatus* is a defect that is characterized by a projection with the appearance of a tubercle on the occlusal surface. However it may also arise on the vestibular and lingual/palatal aspect. The evagination normally contains enamel, dentine and pulp. The defect arises from an evagination of the inner epithelium of the enamel organ or from a focal hyperplasia of the ectomesenchymal cells of the dental papilla. Although there is no agreement on its etiology,

most authors consider that genetic factors are the main reason. Its most common location is in premolars and molars, and it tends to be bilateral. The evagination can appear also in anterior maxillary or mandibular teeth, and the presence of an accessory cusp can be seen that protrudes into the cingulated area. The main complication of this anomaly is that the pulp can extend to the tubercle creating a greater risk of pulp exposure. The treatment proposed in the literature is to reduce the occlusal tubercle or antagonist tooth in order to prevent occlusal problems.

Objective: Presentation and analysis of four case reports with a literature review of the clinical and radiographic characteristics of *dens evaginatus*.

Case reports: E.R.M.A, female patient aged 10 years presented for a check-up on the invagination of tooth 22; A.R.T.V, female patient aged 9 years, presented for a check-up on the invagination of tooth 21; C.H.S.P, male patient aged 11 years presented for a check-up on tooth 26 with an accessory cusp; A.F.C, male patient 11 years presented for a check-up on the invagination of teeth 12 and 22.

Comment: In healthy teeth the application of pit and fissure sealants is recommended. For cavities without pulp exposure, restorative treatment is recommended. However, in cases where there is pulp exposure, the treatment of choice is endodontic therapy. In serious cases of malformation, the extraction of the tooth may be advised.

Conclusion: The treatment of this anomaly varies depending on the degree of deterioration of the affected tooth. The treatment should always be multidisciplinary and it should include restoration treatment, endodontics or even surgery.

39. EVALUATION OF THE LINGUAL FRENOTOMY PROTOCOLS FOR BABIES

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Introduction: Ankyloglossia is a relatively common congenital anomaly that is characterized by an unusually short lingual frenulum that can restrict the mobility of the tongue. On occasions it can impede the correct feeding of a baby.

Currently, the multiple benefits of breastfeeding have led to pediatric dentists giving a greater number of diagnoses of ankyloglossia. There is considerable controversy with regard to its diagnosis and clinical management, and there is great diversity in the criteria adopted.

Objective: To review the scientific literature with regard to the different protocols described and evaluation criteria, in order to determine if ankyloglossy exists and if carrying out a frenectomy in babies under the age of 3 months is necessary.

Materials and methods: A literature search was carried out in the databases of PubMed, Cochrane, Medline and Embase, using the following words: "frenotomy, ankyloglossia AND breastfeeding, infant AND tongue tie, infant OR neonate

AND tongue tie, ankyloglossia AND frenotomy OR frenulotomy OR frenuloplasmy, newborn AND protocol frenotomy”.

Out of the 30 articles found, 8 systematic reviews were selected, 2 control cases and 3 clinical guides. These described a previous diagnostic protocol which included children under the age of 3 months with ankyloglossy and/or feeding problems.

Results: Two different types of evaluations are described for carrying out a frenectomy in babies. In the first protocol a detailed examination is carried out of the oral cavity, and the lingual frenulum is evaluated according to the Hazelbaker scale. Nipple trauma and the failure of the baby to feed efficiently are evaluated by interviewing the mother, and pain by using the LATCH scale.

The Martinelli protocol was divided into medical history, anatomofunctional evaluation and evaluation of nutritive and non-nutritive sucking with independent ratings. When the total of all the values was the same or greater than 13, it was concluded that the frenulum was restricting tongue movements.

Conclusion: There is not enough scientific evidence to indicate which is the best intervention protocol for carrying out a frenotomy in babies but, up until now, Martinelli's protocol is the most complete and the most used in the literature.

40. HORIZONTAL ROOT FRACTURE IN THE APICAL THIRD: A CASE REPORT

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Horizontal root fractures are characterized by an immediate change in tooth structure that involves cementum, dentine and pulp. The fracture in general is as a result of a horizontal impact from a traumatic injury that arises from playing sports, a car accident or a fight. This impact generally strengthens the crown fracture in the palatal aspect and in a slightly extruded direction. Root fractures can be in the cervical, middle or apical third, and in general they involve the permanent central incisors with complete rhizogenesis. The treatment and prognosis depends on the type of root fracture. Therefore, the objective of this study is to relate the case of a patient who suffered a horizontal root fracture in the apical third. The patient was 7 years old, female, without systemic changes, who attended the accident and emergency department of the University after suffering a traumatic dental injury from a sporting activity. During the intraoral clinical examination we observed laceration of the protective tissues and the total displacement of the fragment of tooth 21. The radiographic examination revealed the presence of a horizontal root fracture in the apical third of the root. The treatment carried out was the extraction of the apical portion of the root of tooth 21 and the filling of the alveolus with biomaterial (xenogenic bone). After two weeks, a removable apparatus was fitted which acted as an aesthetic and func-

tional space maintainer. Clinical and radiographic monitoring is being carried out periodically, and the success of the treatment has been observed given the absence of pathologic changes during this period.

41. DISCOVERY OF A CASE OF CONCOMITANT AGENESIS AND SUPERNUMERARY TEETH IS A STUDY OF NUMBER ANOMALIES

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Introduction: Abnormalities in tooth number due to an excess number or to missing teeth may arise simultaneously, although the phenomenon is very rare. This disturbance may affect the primary or permanent dentition, and it is more common in the permanent dentition. It affects the upper and lower jaw. It is more common in men than in women. Having an excess number of teeth does not mean that an individual cannot at the same time have missing teeth, which suggests that there are independent etiological mechanisms. In addition to appearing in an isolated fashion, the anomaly can arise in association with syndromes, and 20 to 50 syndromes have been described in which the pathology may appear. Although there is no definitive classification for this pathology, Gibson proposed a classification according to the area of appearance. They can therefore be classified as: premaxillary, maxillary, mandibular or bimaxillary.

Objective: To present a case with this very rare occurrence and the multidisciplinary treatment.

Case report: Female aged 7 years and 8 months, of Asiatic origin who came for a check-up. The clinical and radiographic examination led to a diagnosis of: fusion of tooth 82 and 83, agenesis of 42 and 11 and 21 that were supernumeraries. The supernumerary teeth were surgically extracted and monitoring was performed. Orthodontic treatment was finally carried out.

Comments: A prevalence of 0.002% to 3.1% has been reported, which makes this anomaly very rare. Generally the missing teeth are mandibular incisors and second premolars, and the supernumerary teeth are anterior maxillary teeth. In this case of ours the missing teeth and the supernumerary teeth corresponded with those that are more commonly described in this pathology. In Spain Varela and cols. carried out a study on orthodontic patients, and found the pathology in 7 out of 2018 patients, 4 men (0.44%) and 3 women (0.25%). Among the general population there are 8-15 cases per 10.000, while in Asia there are 40 cases per 10.000. In a study carried out by Dra. Hernández Guevara a sample was analyzed of 1065 healthy children and only one case of concomitant agenesis and supernumerary teeth was found. This represents 0.09% of the sample studied.

Conclusions: The finding of this case (1 out of 1065) confirms the low prevalence of this pathology. Addressing these cases with a multidisciplinary team of pediatric dentists, surgeons and orthodontists is important in order to improve treatment.

42. IMPORTANCE OF INTRUSIVE LUXATION IN THE PRIMARY DENTITION: SEQUELAE IN THE PERMANENT SUCCESSOR

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Introduction: Traumatic injury to oral hard and soft tissue is common in children up until the age of 6 years. The lesions in the primary dentition have an annual incidence that is significantly higher with regard to the permanent dentition. This is related to poor motor coordination and an inability to evaluate risk. Resilience of the alveolar bone has an essential role in these types of lesions.

Intrusive luxation is specifically defined as the dislocation of a tooth in an axial to apical direction into the alveolar bone, and this can be complete or partial. This type of lesion makes up 8-22% of all luxation in the deciduous dentition. Age at presentation is 1-3 years, and the central maxillary incisors are the teeth most commonly involved.

The IADT (International Association of Dental Traumatology) stresses the importance of an exhaustive examination protocol as well as a need for implanting immediate treatment: conservative action or extraction of the tooth involved, with the main criteria being the least harm possible to the developing tooth. Certain variables influence this therapeutic decision such as the direction of the intrusion, degree of intrusion and presence/absence of a socket fracture. Finally the possible sequelae to the permanent successor should be assessed, and clinical and radiological monitoring is therefore required.

Objectives: To illustrate by means of a series of case reports the importance of the different sequelae observed in the permanent dentition as a result of intrusive luxations of the primary counterpart.

Case reports: Patients in the mixed dentition with secondary disturbance due to an intrusive luxation from a traumatic injury to the primary dentition that showed developmental disturbance to the permanent dentition such as: discoloration of the enamel, hypoplasia of the enamel, crown-root dilacerations, odontomas, root angulation-duplication, arrested root development, sequestration of tooth germ, eruption disturbances such as delayed eruption and ectopic eruption.

Comments: Intrusive luxations in primary teeth have a greater risk of damage to developing permanent tooth germs. Many factors influence the sequelae of intrusive lesions. It

has been demonstrated that the younger the child is when the intrusion takes place, the worse the sequelae for the successor tooth germ. Traumatic injury at a more advanced age tends to cause eruption disturbance, but traumatic injuries at an earlier age tend to cause disturbances to the tooth germ.

Conclusions: The early detection and treatment of this type of luxation are of enormous importance as this will lead to good oral health and a favorable prognosis for the permanent successor.

43. AESTHETIC REHABILITATION OF AN ADOLESCENT AFTER THE AVULSION OF ANTERIOR TEETH

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Introduction: The avulsion of permanent teeth make up to between 0.5% and 3% of all dental injuries. Various studies show that this dental injury is one of the most complicated. Prognosis is related to the place where the accident occurred and the time that elapses. An emergency action plan and suitable treatment are the base for a good prognosis. An avulsed permanent tooth is one of many dental emergencies that is frequently observed, with a greater prevalence in the male sex. In these cases the professionals involved should take extra care and follow the established protocols.

Objectives: Given the frequency of dental trauma in the permanent dentition, it is important to determine and become familiar with the action protocol of various specific entities in the area of Pediatric Dentistry and Dental Traumatology.

Case report: Male patient, aged 15 years and a student, suffered a traumatic injury involving the avulsion of three teeth, losing the right lateral incisor (1.2.) and ingesting the right central incisor (1.1.) and left central incisor (2.1.). During the injury the left corner of his mouth and the subnasal region were lacerated superficially. During his first hospital visit the wounds were cleaned and a week later, at the Universidade Católica Portuguesase, he underwent radiographic evaluation in order to rule out possible maxillary or mandibular fractures, intrusions and/or root fragments in sockets. During the complementary examination the previous hypotheses were ruled out and oral rehabilitation was started.

Comment: Given that in this case the reimplantation of the avulsed teeth was not possible, the guidelines of the American Academy of Pediatric Dentistry were followed. These follow similar procedures to the guidelines of the European Society for Dental Traumatology.

Conclusion: Given that this was a young growing patient, prosthetic rehabilitation was necessary. In this situation a Hawley's expansion appliance was used with three teeth attached to it in the area of the avulsed teeth.

44. METHOD FOR MEASURING IN CBCT 3D THE THICKNESS OF THE BUCCAL PLATE

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Introduction: An orthodontics diagnosis requires an exhaustive examination of periodontal status. Dehiscence, fenestrations and other intrabony defects should be included in the diagnosis and orthodontic treatment plan, as being aware of these problems can affect the treatment plan. Both ectopic positioning as well as the expansion movements and tilting can make hidden or preexisting periodontal defects worse.

Hence the importance of obtaining the exact measurements of the thickness of the bone plate next to the teeth to be moved.

Objective: The objective of this study was to evaluate the creation and viability of an analysis for measuring the thickness of the buccal table of the incisors and lower canines using the diagnostic study program Nemoceph 3-D.

The secondary objectives were:

- To use this measurement analysis in order to obtain registers that would enable establishing a comparison with the angulations of the lower incisor.
- To measure and determine the modification in thickness of the bone plate pre- and post-treatment of surgical patients.

Material and methods:

- 2 CBCT of full skull.
- Nemoceph 3D diagnosis study program.
- Measurement of sagittal slice through planes generated for this parallel to Frankfurt's plane at different levels of the root of the teeth chosen.

Results: This is a simple method that is applicable to other dental areas where we might need to know the thickness of the bone plate for other orthodontic applications.

Conclusions: Similar measurements were obtained to those found in the literature. It should be kept in mind that the technique has its limitations as a result of the radiation of the CBCT and that the measurement being exact depends on the resolution in the CBCT.

45. PRESENTATION OF CASE REPORTS: LOCAL ETIOLOGICAL FACTORS IN DELAYED ERUPTION

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Introduction: Tooth eruption is defined as the movement of a tooth from its site of development within the alveolar process to its functional position in the oral cavity. During

this eruption process we may find chronology disturbances that may lead to early or delayed eruption. Eruption disorders involve a disturbance to the eruption timing that deviates from chronological age in relation to the population mean. Delayed eruption can arise as a result of congenital or local factors. Local factors occur more commonly in the permanent dentition.

Objective: The aim of this study is the presentation of a series of case reports to illustrate all the local factors that can affect tooth eruption and cause the delay, together with a literature review related to each of these local factors.

Case reports: A series of cases are presented, one per local factor that can lead to an eruption delay, as a representative example. The most common local factors are a lack of space, ectopic eruption, dentoalveolar ankylosis, trauma sequelae, supernumerary teeth and tumors.

Comments: To emphasize the need for a correct clinical and radiologic examination when there is a deviation from the chronology or eruption sequence.

Conclusions: In delayed eruption it is more likely to be local factors that affect the permanent dentition. Therefore when identifying the motive for this delay what is most important is carrying out a proper radiological examination to establish treatment in order to permit the eruption of the affected tooth, and to delay the eruption sequence as little as possible.

46. KERATOCYST OF THE MANDIBLE

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Introduction: Keratocyst odontogenic tumors (KCOT or KOT), previously known as keratocysts, are benign cystic neoplasms that are located in the mandible or maxilla, which arise from epithelial remains in the dental lamina (stratified squamous keratinized epithelium). These are locally aggressive, tending to reappear after the excision. In imaging, they appear typically as a unilocular expansive lesion that extends longitudinally into the posterior part of the mandible.

They arise in younger patients (2nd-3rd decades), usually multiple and they can be seen in all the body or ascending ramus of the mandible (approximately 70% of all KCOT). There is a male predilection. For a period they are asymptomatic and are a chance finding. When the symptoms appear, these are swelling and jaw pain, which are common clinical features of tumors.

Objectives: To describe the value of Computed axial tomography (TC) in the preoperative evaluation for keratocyst in the mandible in a boy aged 16 years.

Case report: Boy aged 16 years with swelling and asymmetry on the right side of his face presented to our diagnostic center, referred by an ENT specialist with a suspected slow growing tumor of the parotid gland following ultrasound. A CT was performed for diagnostic evaluation, and ample

information was obtained. This revealed a lack of continuity of the buccal cortical bone that had been caused by a cystic lesion, and which was more accentuated on the lingual aspect in the posterior portion of the right mandible. Given the suspicion of keratocyst, and taking into consideration the anatomic relationship provided by the CT, surgical excision was programmed and performed. The histological examination confirmed the diagnosis of keratocyst.

Conclusion: It can be said that a preoperative CT evaluation of keratocyst of the mandible is very important, in order to determine the exact topography, size and anatomic relationship with neighboring structures within correct surgical planning.

47. CYST WITH AN ODONTOGENIC ORIGIN. SERIES OF CLINICAL CASES

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Introduction: The discovery of cysts in the jaws of children is on many occasions an incidental finding during a routine radiological examination. On other occasions they may be observed during radiologic examination of a tumor. For better understanding the current WHO classification (1992) is used that divides the cysts into odontogenic and non-odontogenic. The most common are odontogenic, and within this group developmental and inflammatory cysts are the most prevalent.

Objectives: To report a series of cases of follicular cysts associated with an inflammatory process in an adjacent tooth.

Material and method: Out of a series of 50 cases of cysts of the jaw diagnosed in the Hospital Sant Joan de Déu, 15 were chosen that had in common a cyst associated with primary teeth together with pulp disease of an inflammatory origin.

Results: The age of the sample varied between 6 and 13 years, 7 were males, 11 cysts were located in the jaws, 11 were related to previous pulp treatment and 4 had pulp necrosis following traumatic injury. The size of the cyst was variable, which determined the symptoms and treatment. For the smaller sized cysts the tooth responsible was eliminated and the cyst surgically removed, and for the larger sized cysts decompression was performed.

Comments: Cysts in our patients are related to necrosis in the primary predecessor and possible previous pulp treatment. This is an inflammatory periapical condition, which may affect the follicle of the permanent tooth, and the term inflammatory follicular cyst would be appropriate. The growth of this lesion leads to a displacement of adjacent teeth, leading to considerable disturbance to size. Some authors report that the lower primary second molar is the most affected tooth. They associate it with the proximity of the tooth bud of the second premolar to the predecessor, and in second place to a greater susceptibility to caries. The treatment carried out in our cases

consisted in the extraction of the primary tooth in all cases, together with curettage of the smaller cysts, and continuous decompression of the larger ones.

Conclusions: Inflammatory follicular cyst arises from a pulp condition and/or previous pulp treatment. Therefore, pulp treatment should be monitored clinically and radiographically. At the same time Pediatric Dentists should be familiar with this entity so that it can be included in diagnostic criteria.

48. DENTIGEROUS CYST: A CASE REPORT

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Introduction: A dentigerous cyst is a developmental odontogenic cyst of epithelial origin that is defined as a cystic cavity that surrounds the crown of a non-erupted tooth at the amelo-cementum junction. It is the second most common cyst after the radicular cyst. It may sometimes be associated with a non-erupted permanent tooth, a supernumerary tooth or with odontomas. The definitive diagnosis will be carried out by means of histopathological analysis. The therapeutic possibilities are enucleation, marsupialization or decompression with the spontaneous eruption of the tooth in question, surgical extraction or orthodontic traction.

Objectives: To illustrate the diagnosis, treatment and monitoring of a dentigerous cyst.

Case report: Patient aged 6 years underwent a routine orthopantomography that revealed a radiolucent image that was well-defined, that encompassed the crown of tooth 45, and which was displacing the tooth germ in an apical direction towards midline. Tooth germ of 44 was being displaced towards the midline. The patient did not have any clinical symptoms. The suspected diagnosis was dentigerous cyst. The treatment of choice was enucleation with extraction of tooth 45. After the histopathological examination the definitive diagnosis of dentigerous cyst was reached.

Comments: If treatment is not carried out, the cyst not only prevents normal eruption of the affected tooth but it may also cause ectopic positioning of teeth, bone expansion and facial asymmetry. According to several authors, generally the bone tissue surrounding the cyst has regenerative potential, and the epithelium of the cyst is transformed into a normal mucosal membrane. But there are studies indicating that there are factors that produce the malignant transformation of the cyst. The main disadvantage of marsupialization concerns the remaining diseased tissue, as a more aggressive lesion may appear in the residual tissue. Given this and the size of the cyst, the distance from the cusp of the premolar to the oral cavity and the possibility of malignancy, the therapeutic option carried out was the surgical enucleation of the cyst.

Conclusions: The dentigerous cyst should be properly and promptly treated and diagnosed given the eruption complications that may arise. And given the possibility of malignant

transgression a complementary histopathological diagnosis should be made.

49. PRE-ERUPTIVE INTRACORONAL ABSORPTION (PEIR): DESCRIPTION, TREATMENT AND DIFFERENTIAL DIAGNOSIS. A CASE REPORT

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Introduction: Pre-eruptive intracoronar resorption (PEIR) is defined as a radiolucent lesion that is well-defined and located in the coronal dentine adjacent to the amelo-dentinal junction of a non-erupted tooth. Most of the lesions are not more than a third of the thickness of the dentin and the teeth that are most affected tend to be molars and premolars.

It is an asymptomatic entity and it is identified as a chance radiographic finding during orthodontic or routine radiographic examination.

The etiology and pathology of these lesions is not clear today. Although these radiolucencies appear to be cavities, it is unlikely that they are infected by cariogenic microorganisms, because the tooth is encapsulated in its crypt. But on eruption caries can quickly develop.

Most go undiagnosed until they are in advanced stages of development. The prognosis depends on early detection and the treatment recommended is always conservative, although larger lesions may be more aggressive.

Objectives: To describe this entity with its resorptive nature and to illustrate the different treatment options depending on how the lesion progresses.

Case report: Male patient presented at the age of 9.5 with a radiolucent lesion of an upper premolar that had been diagnosed through routine bitewing radiographs and which was compatible with caries. Previous radiographs showed the pre-eruptive stage of the tooth, and a cariogenic origin was ruled out. The lesion was restored in a conventional manner.

The same patient 3 years later presented with a similar lesion in another premolar also in the pre-eruptive stage. The peculiarities of this case are presented as various PEIR lesions can be observed in the same patient.

Comments: Currently it has been suggested that many of the lesions that have been diagnosed as "hidden caries" were PEIR lesions at a pre-eruptive stage.

Histological examination shows that the changes in dentin are not caused by caries but rather by resorption due to the invagination of odontoclasts through minor enamel defects.

Conclusions: During the routine radiographic examinations that are aimed at ruling out the presence of anomalies in number, size, shape or position of non-erupted teeth, we should also concentrate on looking for intracoronar radiolucent lesions.

An early diagnosis and treatment of PEIR lesions is essential in order to avoid these progressing and affecting the tooth's pulp upon eruption.

50. DELAYED REPLANTATION FOLLOWING AVULSION IN THE YOUNG PERMANENT DENTITION: A CASE REPORT

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Introduction: Avulsion during the young permanent dentition is a real emergency in child patients. The prevalence wavers between 0.5%-16% and there is a greater incidence among males, the upper anterior teeth, and between the ages of 7-14 years.

The treatment of choice is immediate replantation. According to the literature, this should be done in under an hour, although on most occasions this is not feasible for various reasons and there will be repercussions on the prognosis of the tooth.

The viability of the replantation will depend on the storage medium, the level of maturity or root development and the time that elapses from the avulsion to replantation.

Objective: To present a case report that shows the progress of an upper central incisor, with a closed apex after delayed replanting following avulsion.

Case report: The case is presented of a 14 year-old girl who attended the Pediatric Dentistry Unit of the Universitat de Valencia, after suffering avulsion of tooth 1.1. She had sustained a traumatic injury four hours previously and the tooth had been in dry storage. The oral examination revealed an empty alveolus that was bleeding. The tooth was cleaned with physiological serum and it was replanted immediately, splinted with stainless steel and composite. The root canal of 1.1 was cleaned and filled with Calcium Hydroxide. The splinting was removed partially after a month and completely two months and a half after the injury. Between both stages tooth 1.1 underwent endodontic treatment. The case has been monitored for 6 years.

Comments: A delay in dental care following the avulsion of a tooth often leads to ruling out the possibility of replanting given the uncertain prognosis. However, cases have been published on late replanting of up to 36 hours that progress acceptably in the medium and long term.

Conclusions: We consider that late replanting is a treatment option to be taken into account for the avulsion of a young permanent tooth. Reimplantation, in addition to conserving aesthetic appearance and the confidence of the patient, also favors the conservation of the alveolar bone for possible implant treatment at a later stage. Parents, teachers and healthcare workers should be educated on first aid for a tooth avulsion.

51. TRAUMATIC INJURIES DURING THE PRIMARY DENTITION. REPERCUSSIONS ON THE PERMANENT SUCCESSOR

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Introduction: There is no universal consensus regarding the best treatment protocol for necrotic primary teeth following traumatic injury, and there is much controversy in the literature. There are various treatment options for necrotic traumatic injuries to primary teeth, pulpectomies or extraction/space maintainer.

Objectives: Review of the literature on the different treatments performed in traumatized necrotic primary teeth, long term prognosis and possible adverse effects on mineralization or disturbance to eruption chronology of the permanent dentition.

Material and methods: An analytical observational retrospective study was carried out of cases and controls in which long-term clinical and radiological monitoring was carried out. The sample was made up of 182 incisors, 5 lateral incisors (3 right and 2 left) and 177 central incisors (95 right and 82 left). Out of all the sample 108 traumatized teeth were accepted and with these 39 pulpectomies were carried out, 69 extractions, 74 teeth were discarded as only the traumatic injuries classified by the WHO and modified by Andreasen were accepted. These showed clinical and radiological signs of necrosis such as subluxation, complicated and non-complicated crown fracture, mild lateral luxations, extrusion and intrusions to the extent that both pulpectomy and extraction were good treatment options, and either one or the other was carried out randomly. Traumatic injuries such as serious lateral luxations, intrusions and extrusions were ruled out together with crown-root fractures and root fractures of the coronal third in which the only treatment option was extraction.

Results: With regard to the long-term development and until the eruption of the permanent tooth, 90% of our cases did not show signs or symptoms of clinical or radiological failure of the injured primary tooth, after carrying out a pulpectomy or extraction/ fixed aesthetic space maintainer. However, there was a failure with six cases in which a pulpectomy was carried out that then required extraction/ fixed aesthetic space maintainer, and in two cases which initially required only clinical and radiographic control we had to carry out a pulpectomy. In another 2 cases we just had to place a space maintainer because the patients suffered another traumatic injury, an avulsion.

Conclusions: On studying the variable pathology of the permanent successor between carrying out a pulpectomy and extraction of the primary tooth, a significant difference was not found ($p > 0.05$) in the exfoliation and replacement of primary teeth, malpositions and/or ectopic teeth in the long term evaluation we only obtained and eruption advancement of 63.8%.

SPECIAL PATIENTS

52. VISUAL IMAGES IN THE PEDIATRIC CONSULTING ROOM FOR AUTISTIC CHILDREN

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Introduction: Autism is a disorder that makes connecting with other people difficult.

Viewing these images (graphs or photographs) summarizes certain activities and facilitates anticipating and understanding situations.

Objective: To present two digital images, carried out by our work group in the University Institute of Health Sciences of the North, Gandra, Portugal, so that they can be used in the pediatric dentistry consulting room with autistic children.

Material and method: A search of the literature was carried out between December 9, 2015 and January 13, 2016. The search was carried out using the databases of: Medline/ PubMed, Google Scholar and the library of the IUCS-N with the following keywords: autism, pediatric dentistry, agendas-visuals.

Photographs were carried out in the classroom of the Pediatric Dentistry Clinic III in order to produce two digital visual images.

Results: Two digital visual images (1st consultation and Restoration) that can be used in the pediatric dentistry consulting room for autistic children.

Conclusion: Dentist need always to be prepared to deal with autistic children in the dental office. The use of structured anticipation techniques through "visual images" helps to reduce the need for sedation or general anesthesia. Visual digital images presented by parents and educators to the autistic child before the consultation will facilitate the procedure and reduce levels of anxiety. The digital format of these images makes sending them over the internet, and carrying and storing them for future reference much easier.

53. ASSOCIATION OF DENTAL CARIES WITH HIV CHILDREN

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Introduction: Given the characteristics of the disease, the children affected by the human immunodeficiency virus (HIV) experience a progressive deterioration of their immunological system, and they are more likely to develop oral diseases: periodontal disease, soft tissue lesions and tooth

decay. Up until now tooth decay has not been linked to HIV but recent studies have shown that in this group there is an increase in the prevalence and aggressiveness of caries, given the presence of xerostomia, which is a side effect of antiretroviral treatment and the chronic use of prepared medicines with a high sugar content.

Objectives: To examine the scientific evidence regarding a possible relationship between HIV and greater caries prevalence among pediatric patients.

Material and methods: Search in the literature of PubMed with the keywords: caries/caries, VIH/HIV niños/child, *Odon-topediátrica*/pediatric dentistry. The inclusion criteria were articles in English and Spanish from 2010 to the present time. Parameters were registered such as time with the disease, socio-economic level, prevalence and location of the caries, as well as a register of other oro-dental disturbances.

Results: 20 articles were reviewed and it was determined that there was no specific relationship between dental decay and HIV compared with healthy patients. However, there was a greater prevalence of lesions such as: recurrent aphthous ulcers following infection by the herpes simplex virus. The presence of recurring aphthous ulcers, in addition to being an oral manifestation associated with HIV infection in children can be a side effect of TAR.

Discussion: Risk factors such as xerostomia and high sugar intake make these patients more susceptible to dental caries. The deficient oral health conditions in these patients encourage the appearance of opportunist infections, which may jeopardize their general health and hamper their dental management.

Conclusions: We would like to highlight the importance of the pediatric dentist within the interdisciplinary team managing HIV, who will be responsible for controlling the predisposing factors of dental caries, and who will take extra care with regard to preventative and educational measures, and local systemic factors as a result of immunosuppression.

54. DIAGNOSIS AND TREATMENT OF A PATIENT WITH ELECTRODACTYLY-ECTODERMAL DYSPLASIA-CLEFT SYNDROME

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Introduction: The three cardinal signs of EEC syndrome are electroductyly and syndactyly of hands and feet, cleft lip, with or without cleft palate and abnormalities in different ectodermal structures including skin, hair, teeth (small, absent or dysplastic) nails (dystrophy) and exocrine glands (reduction/absence of sweat, sebaceous, salivary glands). Other associated clinical features include: abnormalities of the genitourinary system, neurosensorial or conductive hearing loss, choanal atresia, hypoplasia of mammary glands, ophthalmological findings, endocrine abnormalities and, exceptional-

ly, the presence of white sponge nevus, delay in psychomotor development and malignant lymphoma. The patients have no intellectual deficit.

It has an autosomal dominant inheritance pattern with incomplete penetrance and variable expressivity.

Objective: To present a case report with EEC syndrome and dental abnormalities in number and structure, cleft lip palate, left renal agenesis and right grade III vesicoureteral reflux.

Case report: Girl aged 9 years was referred to the maxillofacial surgery department of the Virgen de la Arrixaca Hospital for orodental rehabilitation. Systemic medical history: EEC syndrome.

Comments: The patient attended the University dental clinic presenting with oligodontia and disturbances to the enamel in both dentitions. These findings are consistent with those found by other authors in patients with Ectodermal Dysplasia. Anterior crossbite was also observed. Given to her long surgical medical history the patient was somewhat fearful, although she request both an aesthetic and functional solution.

Given her high risk for caries, and following the Cambra protocol, we showed the girl, as well as her parents, hygiene techniques and gave her dietary advice. She came for check-ups every 3-4 months and had fluoride varnish applied. She had bitewing radiographs every 6-18 months, depending on the presence or not of cavities. The application of chlorhexidine at 0.12% was also recommended for one week a month in the form of paste or mouthwash and brushing with a fluoride toothpaste 1450 ppm twice a day for the remainder of the month.

Conclusions: The cases of electroductyly-ectodermal dysplasia-cleft syndrome require multidisciplinary monitoring and the dentist plays a very important role in bringing normality to the daily life of these children with no intellectual deficit and with a near normal life expectancy.

55. EXCEPTION TO THE IADT PROTOCOLS: PATIENTS WITH SPECIAL PEDIATRIC DENTISTRY NEEDS

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Introduction: One of the greatest challenges within dental care for patients with special needs is treating traumatic injuries.

On many occasions reducing or eradicating the predisposing factors for dental disease is impossible, and in addition these children regularly suffer falls. All the authors agree that carrying out correct complementary diagnostic tests in order to obtain and monitor each case properly is very difficult. Also difficult is carrying out proper treatment according to the internationally recognized guidelines drawn up using sci-

entific evidence (International Association of Dental Traumatology guidelines for the management of traumatic dental injuries.2012). The treatment turns out to be highly complex in these cases. Monitoring involves being aware of the pathology affecting these patients and the need for carrying out other systemic evaluations of these children.

This leads to individualized diagnostic and therapeutic protocols for each patient depending on the traumatic injury.

Objective: To propose the need for individualizing the traumatic dental injury protocol for those cases in which the general pathology of the patient impedes carrying out the IADTs standard proposals.

Case reports: This communication presents two case reports. One refers to the traumatic pathology in the young permanent dentition with the presence of dental avulsions and monitoring for 5 years. The patient had PDD with ADHD.

The second case provides the diagnosis, treatment and progress of a psychiatric patient with a traumatic injury as a result of a suicide attempt.

Comments:

- Not always is following the IADTs management criteria for traumatic dental injuries possible, especially in children with special needs, and each case should always be individualized.
- Carrying out long-term monitoring of these patients is very important as are check-ups of the traumatic dental injury according to the IADTs protocols.

Conclusions:

1. The overall health of a patient with special needs should be promoted.
2. When faced with a traumatic dental injury the quality of life of the patient should be assessed over everything else together with the conservation of their physical integrity.

56. THERAPEUTIC/REHABILITATIVE POSSIBILITIES IN CHILDREN WITH HYPOHIDROTIC ECTODERMAL DYSPLASIA

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Introduction: Hypohidrotic Ectodermal Dysplasia (HED) is a genetic disease that affects ectodermal structures (skin, hair, teeth and sweat glands). It includes three subtypes that are almost indistinguishable clinically, which present as the key symptom a decrease in sweating. It is a relatively rare disorder with an estimated prevalence of 1 in 15,000. Christ-Siemens-Touraine syndrome (CST) is the most frequent subtype (80% of cases). It is characterized by a triad of signs: hypotrichosis (a lack of body hair and scalp hair), hypohidrosis (a decrease in the capacity to sweat), and hypodontia (congenital

absence of teeth). Proper dental treatment is essential to alleviate the morphological and functional implications involving the dental signs that accompany this disease.

Objectives: To know the main manifestations of HED and understand the impact this disease has on the patients' lives and their environment. To study the different therapeutic possibilities and demonstrate the need for oral rehabilitation.

Material and methods: A review of the literature on the oral manifestations of HED and the different treatment options.

Results: The diagnosis and treatment of this disease should be carried out at an early age, since, from the dental point of view, these patients will present in both dentitions with different degrees of hypodontia, oligodontia or anodontia. Prosthetic rehabilitation is essential for restoring the absence of teeth through: removable prosthetics, single-tooth restorations with composite resins or rehabilitation with implants.

Conclusions: Oral rehabilitation is essential. It strives to provide a functional and cosmetic solution that provides the patient with the best physical, functional, emotional, and psychological state possible, as we must bear in mind that we are dealing with patients who are still growing. The treatment does not cure the disease, but rather tries to combat the consequences of its signs and symptoms.

57. INTERVENTION PROTOCOL IN PATIENTS WITH EPIDERMOLYSIS BULLOSA. PILOT STUDY BASED ON A SERIES OF CASES

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Introduction: Hereditary epidermolysis bullosa (EB) is a rare disease that represents a heterogeneous group of hereditary diseases with four main types of EB: simplex, junctional, dystrophic, and Kindler's syndrome. Characterized by a marked fragility of the skin and mucous membranes, it triggers the formation of blisters and ulcers in response to minor injuries. All oral surfaces may be involved, including the tongue, the skin of the buccal mucosa, the palate, the floor of the mouth and the gingiva. With these clinical manifestations, knowledge is required to perform full oral management.

Objective: To present our dental protocols, differentiated for each type of EB, in order to minimize the potential consequences that may occur in each of our pediatric dentistry treatments.

Clinical Cases: The sample of cases is shown in table I.

Taking into account the disease type present in each clinical case, we proceeded to put in place the protocols designed prior to each treatment.

In the most serious cases (Dystrophic and Recessive EB), we began with motivation, which was especially necessary in

TABLE I

No. of patients	Type of EB	Gender
3	Dystrophic EB	(3) Female
3	Recessive Dystrophic EB	(2) Male (1) Female
1	Junctional EB	(1) Female
1	Kindler's syndrome	(1) Female

these cases, since the procedure involves pain and may cause blisters as a consequence in these patients.

Equally important were the procedures necessary to achieve an optimal oral aperture in our treatments, especially in children who presented microstomia and synechiae connected to previous dental therapies.

Comments: The dental treatment in children with EB, in particular in those who have a more severe type (Dystrophic and Recessive EB), has changed drastically in the past 30 years. Recent research concludes that it is possible to carry out a full preventive and restorative oral treatment in these patients. In our cases specifically, it was possible to carry out complete treatments, even with orthodontic therapy.

Conclusions:

1. It is essential to devise protocols prior to oral treatment in patients with special needs.
2. Nowadays, given the increased life expectancy of children who suffer from epidermolysis bullosa, it is necessary to consider their oral treatment an essential part of the provision of a better quality of life for these patients.

58. DOWN SYNDROME, ORTHODONTICS AND IMPLANTS (TWO CLINICAL CASES)

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Introduction: Down syndrome (DS) is a genetic disorder, with a prevalence that is estimated at 1 in 700 live births. The person with DS has a characteristic phenotype, greater vulnerability to diseases, and physical and intellectual disability in varying degrees. There is some controversy surrounding the appropriateness of the use of orthodontics and implants in this group due to the greater number of failures.

Objective: To present two multidisciplinary clinical cases in which orthodontics and implant techniques were combined as a therapeutic alternative for patients with DS.

Case reports: Two male patients seeking treatment and in long-term monitoring by the Special Needs Unit of the School of Medicine and Dentistry of the USC. They arrived at 5 and 6 years of age seeking assessment of their dental condition. Initially, they were given orofacial stimulation therapy to improve muscle tone; and in parallel with their development, orthodontic follow-up was carried out. Both cases revealed inclusions of

maxillary incisors without the possibility of orthodontic relocation. In one case, this was due to the associated presence of an odontogenic cyst that was not resolved by surgical treatment and thus an extraction; and in the other, due to tooth ankylosis. Both absences were satisfactorily resolved with the appropriate orthodontic treatment combined with the restitution of the teeth through dental implants.

Comments: Implants and orthodontic treatment may provide a clear improvement in oral and perioral function, and aesthetics, for many patients with DS.

Both techniques require very careful prior planning, taking into account all the patient's medical and dental circumstances. In DS, failure rates have been described for both techniques, which were higher than those observed in the general population.

Conclusions: With proper planning and selection of patients, multidisciplinary implant and orthodontic treatment may be a therapeutic option for patients with DS. However, it is essential to conduct studies with a longer series and long-term follow up to establish specific selection criteria for these patients.

59. POTOCKI-LUPSKI SYNDROME: A CASE STUDY

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Introduction: Potocki-Lupski syndrome (PTLS), also known as duplication 17p11.2, is a contiguous gene syndrome involving the microduplication of band 11.2 on the short arm of chromosome 17. It was described for the first time in a study conducted in 1996; PTLS syndrome was named after two researchers at the Baylor College of Medicine, Dr. Lorraine Potocki and Dr. James R. Lupski. It is considered a rare disease, occurring in at least 1 out of 20,000 people. The symptoms of the syndrome include mild intellectual disability, autism, hypotonia, sleep apnea, learning difficulties, attention deficit disorder, obsessive-compulsive behavior, short stature, and delayed development.

Objective: To describe the dentofacial characteristics present in a patient with PTLS.

Case report: Girl 10 years of age with PTLS presented at the European University Clinic seeking a checkup. Regarding her medical history, we noted developmental delay and low body weight. The patient presented great sensitivity in ears, feet, mouth, and had photophobia. Upon intraoral examination, we observed a mixed dentition at phase 2, with an accelerated transition from primary to permanent teeth. It must be noted that we experienced a number of difficulties in conducting a proper assessment, recording data and carrying out treatment.

Comments: The clinical symptoms described by the authors analyzed in the literature search, match the facial features of the clinical case described. Regarding oral char-

acteristics (malocclusion, accelerated transition from primary to permanent teeth, tongue sensitivity), we did not find many authors who analyzed these data.

Conclusions: In addition to the general pathologies that are specific to PTLs syndrome, no relevant orofacial pathologies were found.

MISCELLANEOUS

60. IS PEDIATRIC DENTISTRY VALUED IN THE REST OF THE DENTAL PROFESSION?

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Introduction: There is currently an overpopulation of dentists in Spain, with numbers that have risen from 13,500 in 1995 to about 34,000 in 2014, representing an increase of 152%. The numbers exceed those recommended by the WHO in regards to the ratio of dentists per capita. This increase in professionals has given rise to an economic undervaluation of dental treatments, as well as a decrease in the quality of the same, which ultimately leads to the commercial transformation of the profession. All of this increases the insecurity and the loss of purchasing power of the professional, leading to a deterioration of the profession itself.

At the same time, the growth in the amount of information that can be accessed at present, either through social media or other means, leads patients and their families to take an active role in the choice of treatments based, at times, on non-scientific, incomplete or incorrect information that give rise to confrontation and to low evaluation and even disrepute.

Moreover, in professions such as dentistry where there is direct contact with the patient, and in very particular circumstances, there is a high incidence of burnout. If to this we add the peculiarities of working with pediatric patients, it seems obvious to think that the practice of pediatric dentistry may trigger a particular rate of professional burnout, associated with a low sense of achievement, emotional exhaustion and depersonalization.

Objectives: To find out the current valuation of the pediatric dentistry profession.

Material and methods: A bibliographical search was conducted in the PubMed database, for articles in English and Spanish, published from 2005 to 2015, as well as in the guides provided by the American Academy of Pediatric Dentistry.

Results: A work overload and lack of recognition, coupled with the fact that it is one of the least profitable specialties in dentistry, make the practice of Pediatric Dentistry not adequately valued today.

Conclusions: Pediatric Dentistry, despite requiring a high degree of study and dedication, is not sufficiently valued in Spain neither on an economic nor social level, and has not officially been regularized as a specialty.

61. PROBLEM-BASED LEARNING: ITS USE IN THE TEACHING OF PEDIATRIC DENTISTRY

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Introduction: Problem-based learning (PBL) is considered to be a fundamental part in medical education, and has reached remarkable popularity in recent years. It is a method based on “self-directed learning”, in which the protagonists of the learning process are students.

Objective: Details are given of an educational experience launched in the Academic Unit of the Integrated Dental Clinic for Children (COII) of the USC, inspired in PBL.

Method: We created a virtual patient who throughout the academic year “grew” and suffered from various dental problems. In various sessions conducted throughout the course, students were given information about these problems (medical history, photos, x-rays) and for 15 minutes, they completed, in teams, a standardized questionnaire for the diagnosis, treatment, etc.

Results: This PBL activity allowed us to incorporate clinical situations that are not very common at the university clinic and forced students to go through a decision-making process that is similar to a real clinical context. The students were more aware of the implications of their decisions and their training needs in a “dedramatized” environment.

Conclusions: The general perception of the teachers and students is that the activity was very positive in the learning process, with a progressive involvement of students as the activity was being carried out. The feedback obtained from the students who graduated has led to the incorporation of this activity into the course’s teaching activities in recent years.

62. HOW TO IMPROVE CHILDREN’S QUALITY OF LIFE THROUGH THEIR ORAL HEALTH. THINKING OF THOSE WHO ARE MOST VULNERABLE

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Introduction: The World Health Organization (WHO) recognizes that poverty and social inequalities play a fundamental role in the presence of oral diseases and the possibility of receiving treatment. Despite the great achievements in the oral health of populations globally, this is still one of the major public health problems. The highest incidence is found in the underprivileged and socially marginalized populations, such as those in Africa and Southeast Asia; we will specifically consider the organization and work plan of a Spanish-French NGO working in the area of Phnom Penh.

Objectives: a) to show the way the work, dental care, and plans for the promotion and prevention of oral health are carried out in a population of Cambodian children; and (b) to evaluate the dental treatments carried out by the volunteers who serve this organization.

Materials and methods: The Oral Health Plan is included within the medical care and prevention program of the NGO called For a Child's Smile or PSN/PSE. This program was launched in 2012 thanks to contributions from institutions, such as the General Council of Dentistry and Stomatology of Spain, through the attainment of the award for the financing of social programs in the third world, and in 2013 with financing for the acquisition of a mobile dental unit which facilitates access to dental treatment for families who live far from health centers.

Results and discussion: The oral health plan is presented, featuring prevention programs adapted to the reality and needs of this country, as well as promotion and prevention lectures.

Table I summarizes the clinical actions performed on the children, between 2014 and 2015, in both the dental clinic and the mobile unit.

Conclusions: It is important to strengthen health promotion and disease prevention strategies, in order to lead families towards a change in attitude and behavior regarding their children, thus achieving the improvement in health conditions and quality of life overall.

TABLE I

<i>Year 2014</i>	<i>Dental clinic</i>	<i>Mobile unit</i>
Total number of children attended	2.797	1.434
Extractions	1.608	1.387
Fillings	1.860	61
Root canals	561	0
<i>Year 2015</i>		
Total number of children attended	2.966	2.097
Extractions	1.558	1.734
Fillings	2.128	818
Root canals	756	67

63. INFORMED CONSENT IN PEDIATRIC DENTISTRY

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Introduction: Informed consent is defined as “the free, voluntary, and conscious conformity of a patient, expressed when he or she is in sound mind, after receiving the appropriate information regarding an action that affects his or her health” (law 41/2002).

Any and all action regarding the patient's health necessitates the free and voluntary consent of the affected. Thus, it would be justified to review the recent literature and update our knowledge on consent in pediatric dentistry.

Objectives: The main objective of this work would be to review the literature on informed consent in Pediatric Dentistry and emphasize its importance in clinical practice for ethical responsibility and purposes.

Materials and methods: The following were used as search tools: PubMed, Google Scholar, Web of Science, and Ebsco Host, in conjunction with the Boolean operators “and”, “or”, “not” and the keywords: “informed consent by minors”, “bioethics”, “pediatric dentistry”. A filter was applied to the bibliographic search by selecting articles published in high-impact journals between 2010 and 2015, full-text, in English and Spanish that included the search terms in the titles or abstracts. The initial search led to 37 preliminary publications, of which 12 were selected, as the abstract matched the selection criteria. The articles that did not contribute to the achievement of the objectives were excluded.

Results: In underage patients with intellectual or emotional disability, who may not understand the extent of the intervention, current legislation allows consent by representation; informed consent will be given by the minor's legal representative, after hearing the minor's opinion if he or she is at least twelve years old.

For patients who are at least 16 years old, with no disabilities, or who are emancipated, the current legislation states they may give their consent, and consent by representation is not necessary. However, in interventions that involve serious risk, according to the criterion of the professional, consent shall be given by the minor's legal representative, once the minor's opinion has been heard and taken into account.

Conclusions:

1. Informed consent is an essential part of the profession, whether it is dentistry or pediatric dentistry, and must be applied daily.
2. The respect for the rights of minors and ethical behavior helps us achieve a level of excellence in Pediatric Dentistry, adjusted to the needs of today's society.
3. It is important to encourage investigation on informed consent in Pediatric Dentistry, with regard to its importance and impact on the academic, clinical and scientific fields.

64. THE STATE OF ORAL HEALTH IN A POPULATION OF SAHARAWI CHILDREN

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Introduction: During the summer months, a large number of children from the territories of the Western Sahara visit our country within the program called “Holidays in Peace” (Vacaciones en Paz). They stay in certain Spanish cities, brought into the homes of host families. During these months, they become a part of our population, and therefore require medical and dental treatment.

Objectives: The aim of the present study was to study the state of oral health of these children, by analyzing rates of caries and fluorosis. The general objective of this study, was to carry out a descriptive epidemiological cross-sectional study of a selection of these children in the province of Sevilla.

Material and methods: In order to carry out this study, we adopted a research design in which a WHO assessment form was used, modified as described in the publication “Oral Health Surveys. Basic methods”, the 1997 edition, therefore adopting the methodology recommended by the WHO.

The children were assessed at the headquarters of the Social Dentistry Foundation of the city of Sevilla, and their host parents signed the consent to participate in the study.

Results: Out of the 355 children hosted in the province of Sevilla, 154 were assessed, and we were able to observe that the prevalence of caries in primary teeth was 78% and in permanent teeth, 62%, with a DMFT of 2.54 and a relatively low RI of 0.32. The Fluorosis Index (Dean’s Index) was actually high, as expected.

Conclusions: The main conclusion reached is that the Saharawi children hosted in Spain require treatment for oral health, which could be covered by public health if these children had the right to be attended by the Children’s Dental Care Program (Programa de Asistencia Dental Infantil or PADI).

65. A COMPARATIVE STUDY OF PRIMARY DENTAL CARE BETWEEN CHILDREN WITH COMPLEX CHRONIC CONDITIONS AND HEALTHY CHILDREN

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Introduction: According to current consensus, children with complex chronic conditions are those who have significant chronic conditions in two or more systems of the body. A significant chronic condition is defined as a physical, mental, or developmental retardation that lasts for at least one year.

Or a progressive condition that is associated with health deterioration and a decrease in the life expectancy in adulthood.

Or a continuous dependence on technology for at least 6 months.

Or malignant diseases: malignant or progressive metastatic tumors that affect vital functions. We must exclude those in remission for 5 years.

Objectives: To compare a sample of healthy child patients with child patients suffering complex chronic conditions.

Materials and method: An anonymous survey was given to the parents or legal guardians of 50 children over one year and up to 18 years of age suffering complex chronic conditions in the La Paz Hospital in Madrid.

A survey was given to the parents or legal guardians of 50 child patients over one year and up to 18 years of age, who were healthy and suffering no complex chronic conditions at a medical center in Madrid.

Access to dental care was measured in the following areas:

- Prevention: brushing, paste (500 ppm - 1500 ppm fluoride), mouthwash, and sealants.
- Therapeutic: hygiene and prophylaxis, fillings, extractions, and pulpotomy/pulpectomy.
- Interceptive treatments.
- Orthodontic treatments.

Results: In the 50 surveys carried out, there are clear differences in that the group of children with no complex chronic conditions pathology presents greater accessibility to dental care with regard to prevention, therapies, and interceptive and orthodontic treatments than patients affected by chronic conditions.

Conclusions: It is shown that healthy child patients have better access to oral health than patients with complex chronic conditions.

66. ETHICS IN “SUPPOSEDLY NON-INVASIVE” PEDIATRIC DENTISTRY

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Introduction: The current increase in the prevalence of caries in children around the world has led to the need to create a program with simple but effective treatments, where more conservative and less invasive techniques are used, thus managing to preserve a greater portion of the dental tissue and providing a success rate that is as good as in conventional treatments while contributing to reduce anxiety.

During the consultation with Pediatric Dentistry, we face situations in which we must make decisions aimed at repairing rather than replacing, always focusing on the use of the most suitable materials for each particular case.

Social pressure, as well as the treatment demands expressed by parents, lead us to sometimes overstep the line between what is right and what is considered malpractice.

Objectives: To analyze the basic principles of non-invasive treatment, as well as the attitude and techniques to be adopted by pediatric dentists in the dental consultation.

Material and methods: A bibliographic search was conducted in the PubMed and Medline databases, and e-journals, with the keywords: “minimal intervention dentistry, prevention and management protocols using caries risk, remineralisation and therapeutic sealants”. We found 347 articles. **Inclusion criteria:** articles and e-journals, published less than five years ago (2010-2015). **Exclusion criteria:** articles published more than five years ago.

Results: The benefits of the use of non-traumatic techniques are described in the literature and as health professionals, we need to put the patient first and consider the parents’ opinion, building trust and cooperation through the stimulation of positive attitudes and behaviors in relation to the dental treatment, which is why we must rely on these techniques but in a suitable way.

Conclusions: The ideal scenario would be for children to attend the consultation with no clinical signs of carious lesions, but this is not a reality for most. The traditional methodology focused on treating the consequences of dental caries has evidenced changes that make them more conservative.

Parents frequently ask for treatments that are often not required. However, they require us to carry them out because they believe that this will decrease their children’s fear. This is where we play an important role, since our code of ethics helps us decide what is more appropriate for each patient.

67. EVALUATION OF THE TREATMENT NEEDS OF A GROUP OF SCHOOL-AGE CHILDREN FROM THE AREA OF OTXARKOAGA, BILBAO

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Introduction: Oral pathology is a multifactorial entity. The maintenance of the correct oral hygiene measures and healthy eating habits are determining factors and where we can exert the most influence in order to combat high prevalences of disease. However, there are sectors of the population in which their cultural roots and way of life are a major barrier to changing habits towards healthier situations.

Objectives: *Main:* to describe the oral treatment needs in a sample of school-age children living in the Otxarkoaga district of Bilbao. *Secondary:* to create personalized reports on conditions and treatment needs. To prepare guides for nutritional education and oral hygiene techniques suitable for each age group. To involve parents/guardians in the oral health needs and promote the establishment of healthy habits.

Material and methods: The health service of two schools located in Otxarkoaga was used to carry out the assessment of students between the ages of 2 and 7 (n = 77). A medical history was completed with the help of the parents. Assessments are conducted in rooms provided at the centers to avoid even the smallest sample loss due to non-attendance. Intraoral mirror, headlight and mouth opener were used for the oral

examination. Data was collected on caries, the presence of plaque, malocclusions, and habits (thumb/pacifier sucking, tongue interposition, and mouth breathing).

Results: From the initial sample, 1 individual was lost due to non-cooperation, thus obtaining a final sample of n = 76 (38 boys and 38 girls). The total percentage of patients with caries was 61%, and 95.7% of which was in the primary dentition. Habits arose in 34.2%. Regarding plaque, 56.57% of the patients had levels.

Discussion: In similar research, such as Mora and Martínez (2010), which compared a Gypsy child population to a non-Gypsy, 58% of the first group presented caries compared to 29% in the second. The difference is most relevant when compared with data obtained from the PADI (Infant Oral Care Program), where only 2% of 7-year-olds have caries.

Conclusions: The prevalence of oral disease shows higher values for this population. Environmental and cultural factors appear to be associated. Establishing prevention plans and providing access to treatment is necessary, as is detecting the most effective way to introduce these in order to achieve greater commitment among this group, greater success of the program, and an improvement in their oral and general health.

68. GOOGLE IN PEDIATRIC DENTISTRY

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Introduction: Since the advent of the internet in the 1980s, it has been used as a means of dissemination and communication in a basic way, but over the years, it evolved, and search engines appeared (Google, Microsoft...), which have expanded our vision in the field of dentistry, in both positive and negative ways. In Pediatric Dentistry, in recent years, it could be said that some parents attend the consultation with a diagnosis and treatment plan done at home, due to the extensive information available in the internet, but the veracity is highly questionable.

Objective: To assess the positive and negative effects of the extensive information that is available to the general public related to dentistry, and the effects this produces in our field, that of Pediatric Dentistry.

Material and method: We performed a literature review in PubMed and the Cochrane Library databases, of national and international journals, using the keywords: parents, internet, pediatric dentistry, dentistry, treatments, health, ethics, quality, doctor (in Spanish), as well as searches in books and websites.

Results: During our search, we found many websites that display information, both correct and incorrect, in which many make statements with no scientific basis, which is why the information found by readers looking for specific treatments and materials used in the dental practice would be questionable when formulating a diagnosis and carrying

out our treatment plan. As for the search for evidence-based literature, we did not find information in connection to this.

Conclusion: The internet is evolving at breakneck speed and provides many benefits in the dental field. Its use has multiple benefits in our field, both in terms of communication and dissemination and access to scientific information aimed at the general public. But the presence of dental marketing and certain parent groups and professional groups who are opposed to the use of certain materials represent the “dark side” of Google. So, the search for information carried out by parents is a good indicator of their interest in their children’s oral health, as well as in their own. But the negative information found leads to confusion when deciding what kind of treatment they want applied to their children. We consider this of utmost importance for future research in the field of Pediatric Dentistry.

69. THE IMPACT OF ORAL HEALTH IN THE QUALITY OF LIFE OF CHILDREN ATTENDING FOR CONSULTATION WITH PEDIATRIC DENTISTRY

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Introduction/Justification: The World Health Organization (WHO) recognizes oral health-related quality of life (OHRQOL) as a multidimensional construct that includes a subjective assessment of the person’s oral health, the functional, emotional well-being, the expectations and satisfaction with the care obtained and the sense of self.

We need to update and investigate the physical, psychological and functional impact reflected in the perception of well-being in the child population. This would represent a social indicator for the management of these oral diseases, with the goal of working towards raising awareness in parents of their responsibility for their children’s oral health.

Objective: To conduct a review of the literature on the impact of oral health in the quality of life of school-age children and adolescents.

Material and methods: The following databases were reviewed: PubMed, Google Scholar, Web of Science, with the use of the following keywords: “oral health”, “quality of life”, “dental caries”, “child”, “adolescent”, in conjunction with Boolean operators (and, or, not). High-impact journals were included and selection filters were applied for articles published between 2010 and 2015, about children aged between 6 and 14 years, and which contained the search terms in the titles or abstracts. We obtained 53 publications and selected 12 articles for the present review, excluding those that did not contribute to the achievement of the objectives.

Results: By applying the P-CPQ (*Parental-care giver perceptions of child oral health-related quality of life*) instru-

ment, we demonstrated that there is a significant relationship between caries and functional limitations. Additionally, emotional well-being and oral symptoms predominated in children attending public schools.

Moreover, a greater number of caried teeth would be associated with pain, which may affect physical functioning, the emotional state, and behavior. These results suggest that the children with more caries are likely to experience more oral pain and difficulty when chewing.

Lastly, in terms of dental caries and malocclusion, there is a negative impact that lies in the low self-esteem and different psycho-social aspects. Additionally, we found that the quality of life was more affected in students coming from low socio-economic level families.

Conclusions: The oral health-related quality of life in children and adolescents is influenced by various determinants of health, not only clinical conditions, but also by socio-demographic factors and the family the child is immersed in.

70. BEYOND THE BRAND

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Objective: To ensure that the Dentist brand (your brand) is the only one on the minds of your patient’s parents.

Abstract: Dentists today are accustomed to hearing comparatives in the media and forums... “whiter teeth”, “faster processes”, “easier processes”... and the latest addition: “cheaper”; if we choose to play this game, we are simply transformed or transform ourselves into just another generic product.

As health professionals, we can’t not have a *brand*, that which gives us an identity, since we are only known as Dentist –Dr.– a “White” brand.

Throughout the day, we come in contact with over 1,500 brands. We live in a world of brands, and this forces us to find our own.

In this paper, we will try to provide new ideas and do away with conventions and recipes. To do this, we will present a few tools to help us build a brand, which will allow us to have continuity in the midst of the global uncertainty the field of dentistry is currently feeling.

Recommended literature:

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71. THE KNOWLEDGE OF DENTISTS WHEN DEALING WITH TRAUMATIC TOOTH INJURIES

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Introduction/Justification: Traumatic tooth injuries are currently the second cause for seeking dental care in children after caries. As it is a common and significant problem in dental health, it necessitates: immediate attention, accurate diagnosis, appropriate treatment and long term follow-up. Therefore, an extensive and up-to-date knowledge of the subject is required of the dentist in order to increase the chances of success in the treatment of injured teeth.

Objectives: To carry out a current review of the literature on the knowledge of dentists when dealing with tooth injuries.

Material and methods: A literature search was conducted in the following documented sources: PubMed, Web of Science, EbscoHost, and Google Scholar, with the use of the following keywords: “knowledge, tooth injury, tooth avulsion, dentist”.

We selected 970 articles. They were classified for the second time with the application of the following selection filters: articles published between 2010 and 2016, in English or Spanish, full text, that include the search terms in the titles or in the abstracts, published in high-impact journals, with the exclusion of the articles that did not contribute to the achievement of the objectives. Six articles were included in the present review.

Results and analysis: The results obtained were:

- The criteria set forth by the IADT (International Association for Dental Traumatology) were followed in all of the studies when dealing with tooth injury.
- Most of the dentists act correctly in cases of crown fracture and dislocation.
- A large proportion of dentists show inadequate knowledge regarding the treatment of avulsed teeth.
- Most dentists know that when treating tooth avulsion, flexible splinting should be used, but there are discrepancies in reference to the time the splint should remain in place.

Conclusions:

1. There is moderate knowledge regarding how tooth injuries should be handled, pointing to a lack of confidence when dealing with cases of complex injuries.
2. We noted a relative lack of knowledge regarding avulsion and its treatment, especially in regards to the duration of the follow-up after replantation.
3. It is important to provide dentists with programs for continuing education in the management of tooth injuries, in order to increase success rates in the oral health of the child population.

72. PEDIATRIC DENTISTRY “ON DEMAND”

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Introduction: Recent scientific studies agree that pediatric dentists currently have more problems when treating child patients. There have been changes in attitude of patients and parents, who have forced us to modify our work in many aspects. It is not unusual today to come across parents or children who decide or demand a form of treatment, or how and when it must be done, thus placing dental needs “on demand”.

Objectives: This review has the objective of assessing what factors have influenced these changes in attitude of parents and patients in the area of dentistry and the points related to this “pediatric dentistry on demand”.

Materials and methods: A literature search was conducted in the Medline database with the use of the PubMed search engine, and we reviewed several articles and guides, published from 2006 to 2015.

Results: Currently, the relationship between dentist-child-parent is different from what it was in the past. The trust placed on the dentist has decreased, as well as the authority this professional has. There are many factors that influence this relationship, including factors linked to parents and children, the parenting style affecting it the most. Today, we are witnessing an increase in the permissive parenting style, which involves less discipline in children’s education. This arises from the parents’ need to overprotect their children, which in the dental consultation, translates into the need to prevent them from feeling any emotional distress. These changes play an important role in decision-making. This permissiveness in terms of what parents demand from their child means that the child is allowed to decide when the treatment should be performed or how it should be performed, resulting in behavior that is not suitable in the dental practice. Parents who offer this type of education may also require that treatments be carried out in a certain way or question what is the best way to do it.

Conclusions: Parenting style is an important factor, and it influences the management of dental treatment in pediatric dentistry. An assessment of the characteristics of the parents and children prior to the treatment may help the pediatric dentist handle the situation with greater ease.

73. NATURAL PEDIATRIC DENTISTRY

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Introduction: According to WHO (World Health Organization), health is a state of complete physical, mental, and

social well-being, and not merely the absence of disease or infirmity.

Natural dentistry, also known as holistic dentistry, includes the observation of the patient as an individual as a whole and his or her respective needs. We must take into account that oral conditions have a strong history of treatments with natural remedies. Dental caries and periodontal disease are caused mainly by microorganisms present in dental plaque, which is eliminated through traditional, mechanical methods and natural chemical methods, among which we find mouthwash made from T. chebula and cinnamon plant extracts, which work as antiplaque and antibacterial agents. On the other hand, this kind homeopathic therapy also involves the use of natural remedies for the treatment of anxiety, such as with Valerian root or flower essences, and for the relief of postoperative pain, such as with arnica, fringed rue or hypericum.

Objective: The aim was to carry out a review of the literature to study the efficiency and effectiveness of natural remedies in comparison with traditional dentistry, determining the possible options available for integrating new techniques for the prevention and treatment of various conditions, and thus avoid toxic or harmful side effects.

Material and method: A search was conducted in the Pubmed database, which included articles on the topic, regarding human cases, and which were in English or Spanish, using the following keywords: "Holistic dentistry/ Alternative dentistry/ Alternative medicine".

Results: The majority of alternative techniques in so-called natural dentistry, have not been tested in long-term clinical studies, mainly due to methodological difficulties in the assignment of patients and in the control of the experimental groups. However, some of these, regarding the use of natural remedies like arnica or hypericum, have shown good results in comparison with traditional dentistry, therefore, natural components may play an important role in the understanding and treatment of oral diseases.

Conclusion: It will be necessary to conduct clinical studies in order to determine the effectiveness of these methods and to apply them to our dental practice.

74. MATURATION PARAMETERS FOR DETERMINING BONE AGE IN CHILD PATIENTS

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Introduction: Chronological age is understood as the measurement of the time lived by a person from birth until the present time. An individual is considered to have not only one age, but several, as the different systems that make up a body are developed independently. When considered as a whole, these ages produce a biological age, which is based on the degree of maturation of the different tissues of the body.

Objectives: To study existing methods in order to assess bone age of child patients in the dental practice.

Material and methods: We conducted a review of the literature in the PubMed and Medline databases, using the terms: bone age, Greulich & Pyle, Tanner-Whitehouse, FELS, and cervical vertebrae.

Results: The estimation of age based on the skeletal maturation process, called bone age is one of the most frequently used methods in children and adolescents, and is defined as a measure of the progress of ossification toward maturation. The methods developed for the determination of age tend to be focused on the degree of development of the bones of the wrist and hand, of the cervical vertebrae and in cases close to 21 years of age, of the clavicle. The factors responsible for a normal pattern of maturation are not clear, but it is true that the genetic, nutritional, metabolic, social, emotional, environmental and hormonal factors play an important role in this process.

The X-ray of the wrist is considered to be the more standardized method for the evaluation of skeletal maturation, based on the time and on the sequence of appearance of the carpal bones and of certain ossification events. There are many methods used to evaluate the growth of this anatomical region, but the most commonly used are the Greulich and Pyle atlas, the Tanner-Whitehouse test, and the FELS method.

In Pediatric Dentistry and Orthodontics, as routine radiographic testing usually shows the cervical vertebrae, the study of their appearance and growth may be a simpler method to assess the patient's bone age. For this reason, the cervical vertebrae may be proposed as an alternative to the x-ray of the wrist when determining skeletal maturation.

Conclusions: The methods used for the determination of bone age in dentistry may be of help in the planning of Orthopedic and Pediatric Dentistry treatments in child patients.

75. ASSESSMENT OF THE IMPORTANCE PARENTS GIVE TO THE CONSULTATION IN PEDIATRIC DENTISTRY

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Introduction: Contemporary Dentistry, and especially Pediatric Dentistry, base their actions on the prevention of caries, periodontitis, orthodontic problems and developmental disorders of the oral cavity and mastication or stomatognathic system.

In early childhood, a clinical condition is often found, called early childhood caries, which results from breastfeeding or bottle feeding over extended periods, a condition that sometimes appears before the completion the first dentition. Dentistry specializing in early childhood begins with guidance offered to pregnant women, and success in the promotion of oral health through education has been achieved.

Oral health as a part of the overall health of the baby and the child is the main objective of Pediatric Dentistry.

Objective: To analyze the importance parents give to Pediatric Dentistry.

Material and method: This was a descriptive study which involved the application of a questionnaire addressed to parents and/or legal guardians of the child(ren) who attended the consultation at the dental clinic at the Universidad Europea de Madrid in the area of Pediatric Dentistry.

Results: Parents who attend the consultation are mostly between 41 and 50 years of age, predominantly female. Children were mostly between 2 and 4 years of age, predominantly female, many of whom were not attending the dental consultation for the first time. A large percentage felt that the first dental visit should be with a pediatric dentist; however, the first dental visit for most patients was with a general dentist.

The main reason for consulting was the presence of caries. Most of the parents have not received information regarding early oral health; some have received information and were referred through a general dentist or pediatrician.

Conclusion: We were able to conclude that the main reason for the first visit to the dentist is the presence of caries or injury. Although parents believed that the treatment should be performed by a pediatric dentist, the first consultation was with a general dentist. It is necessary to inform expectant mothers regarding about oral care for child patient's.

Objective: To analyze the effectiveness of antimicrobial prophylaxis protocols in the prevention of bacteremia secondary to dental treatment in the pediatric population.

Material and methods: We applied a search strategy adapted to the Medline, PubMed, Ovid, Embase and Scopus databases. We selected all the clinical studies in the pediatric population (age < 16 years old), in which the prevalence of bacteremia post dental manipulation was analyzed in a control/placebo group and a group that received antibiotic and/or antiseptic prophylaxis.

Results: Seven articles involving pediatric patients were identified. After analyzing the full articles, four were considered for the present review. In only two studies a previously recommended prophylactic measure was administered (oral amoxicillin 50 mg/kg). Antibiotic prophylaxis decreased the prevalence of bacteremia secondary to extractions or conservative treatments performed under general anesthesia, in both healthy children and those with heart disease. There was a series where a dosis of procaine penicillin + benzylpenicillin or tetracycline was not effective in cardiac patients in chronic treatment with penicillin V. We found no evidence of the effectiveness of antiseptic prophylaxis. Bacteremia was usually of a streptococcal nature.

The quality of the evaluated clinical trials was low. Only one was randomized and none took into account possible conditioning factors (state of oral health, complexity of the intervention...).

Conclusions: There is little evidence on the efficacy of antimicrobial prophylaxis of IB in the prevention of bacteremia in pediatric patients post dental manipulation. While it is noted that the antibiotic protocol is effective, the effect of antiseptic prophylaxis is unknown.

DRUGS

76. EFFICACY OF ANTIMICROBIAL PROPHYLAXIS FOR INFECTIVE ENDOCARDITIS SECONDARY TO PEDIATRIC DENTAL TREATMENTS: A SYSTEMATIC REVIEW

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Introduction: In the last few decades, due to various controversies, the advisability of administering antimicrobial prophylaxis for infective endocarditis (IB) has been questioned in patients who are "at risk" in the practice of dental treatments. Moreover, a few expert committees, such as the UK's "National Institute for Health and Care Excellence" adopted a drastic attitude in this regard in 2008, by not recommending antimicrobial prophylaxis for IB in the dental field. However, we have recently witnessed an increase in cases of IB with a possible oral origin in the United Kingdom. In this context, it is essential to clarify by means of a critical review of the literature, which is the most effective prophylactic protocol in the prevention of bacteremia secondary to dental manipulation.

77. PHENTOLAMINE MESYLATE: A SOLUTION FOR THE REVERSAL OF THE EFFECTS OF ANESTHESIA IN PEDIATRIC DENTISTRY

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Introduction/Justification: Phentolamine mesylate is a non-selective, competitive α -adrenergic antagonist that acts by reversing the effect of local anesthetics combined with a vasoconstrictor. It is a vasodilator that blocks the endogenous effects of vasoconstrictors in oral soft tissues. It accelerates the return to normal function, thus allowing the patient to speak, drink and smile normally and avoid self-inflicted injuries, uncontrolled drooling, and the perception of an altered appearance. It is a new option that may prevent injuries in pediatric patients in the dental practice.

Objectives: To explain the action mechanism, pharmacokinetics, indications, contraindications, dosage, adverse effects, advantages and disadvantages of Phentolamine mesylate.

Material and methods: Bibliographic searches were conducted in the Cochrane and Medline databases with the following keywords: “child, preschool, adolescents, phentolamine mesylate, local anesthesia, local anesthetic reversal”.

Results and analysis: The phentolamine mesylate reverts the anesthesia of soft tissues and reduces its duration by approximately 50%. It is indicated for reversing the anesthesia of oral soft tissues and the functional deficits that arise from an intraoral submucosal injection of an anesthetic that contains a vasoconstrictor.

Phentolamine mesylate should be administered after a dental procedure, by infiltrating the same place and following the same technique used for the administration of local anesthesia.

In the clinical studies reviewed, the safety and efficacy of phentolamine mesylate was established for the group between 6 and 17 years of age. The efficacy in pediatric patients under the age of 6 has not been established. The use of phentolamine mesylate in patients between 6 and 17 years of age is supported by adequate and well-controlled studies. Safety has been evaluated in patients younger than 6 years of age but not the effectiveness. Doses in pediatric patients should be restricted to body weight.

Conclusions: Phentolamine mesylate is a therapeutic option when the anesthetic effect is prolonged and local anesthesia has the potential to cause a negative impact on the lifestyle and the physical integrity of the patient.