#### **Posters Communications**

#### INVESTIGATION

### 1. PREVALENCE OF COLOR IN PRIMARY TEETH. PILOT STUDY

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Introduction: There are not very many studies on color in the primary dentition. Nevertheless, having an understanding of the chromatic characteristics of primary teeth, especially those in the anterior region, is important in pediatric dentistry restoration.

*Objectives:* To determine the color parameters of anterior primary teeth in a group of children aged 5-6 years in the region of Murcia.

Material and methods: Vita color was obtained together with the parameters for luminosity, chrome and hue in the upper anterior group of teeth of third year preschoolers (n=33) aged 5-6 years of a school in Murcia who were chosen at random. Teeth with pulp necrosis were rejected. Color registration was done by the same operator and under the same conditions with an Easyshade spectrophotometer (Vita®) The values were represented in the chromatic CIEL\*c\*h\*space. The results were analyzed with the statistical program SPSS and the means were compared with the t-test (for independent samples and paired samples) for a significance level of 95 % (p < 0.05).

Results: Two central incisors and a canine were excluded. Mean global luminosity was 84.92(SD 4.00), and in each group of teeth: Central Incisors (CI) (86.38–SD 3.41) > Canines (C) (85.68–SD 3.44) > Lateral incisors (LI) (82.71–SD 4.18). Mean saturation or chrome was 18.03 (SD 4.63) and for each group of teeth: C(18.87–SD 3.78) > LI (18.52–SD 4.89) > CI (16.71-SD 5.23). The mean hue or color obtained was of 89.58 (SD 2.87) for each group of teeth: C(91.37–SD 2.68) > IC (89.1-2.58) > IL (88.26–SD 3.37). There were no significant differences between boys and girls in any of the parameters. The most frequently obtained Vita colors were A1(51.73 %) followed by A2(28.21 %) and B1(13.86 %). Table I reflects the percentages for each tooth according to sex:

	53	52	51	61	62	63
Boys (n = 18)	A2 = 38.88% A1 = 27.77%					
	A2 = 46.66% A1 = 40.00%					

Conclusions: Bearing in mind the limitations of the study, Murcian school children aged 5-6 years had high luminosity, little chrome and a yellow hue.

## 2. RELATIONSHIP BETWEEN THE SIZE OF PRIMARY MOLARS AND PREFORMED STEEL CROWNS

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Preformed crowns were introduced by Humphrey in 1950. Currently, with developments in technology, changes in material, advances in pulp therapy, anesthesia and behavior, they continue to be the treatment of choice for primary teeth with extensive caries, when the retention and resistance of conventional restorations may be compromised, although zirconium crowns with better aesthetic results can be found today on the market

Preformed crowns are a good treatment option, providing they are fitted correctly, as they are economic, very durable and highly functional.

However the size of the crowns does not always adapt to the size of primary teeth and this is more noticeable when the loss of tooth material due to caries changes the size of the teeth.

Objectives: To compare the mesiodistal size of primary molars of a total population sample with the mesiodistal size of preformed stainless steel crowns by 3M® available on the Spanish market.

Material and methods: In order to carry out this study, the mesiodistal sizes of the first and second primary molars of 130 school children of the Community of Madrid, and of three populations, were measured. The measurements were carried out using plaster.

The mesiodistal size of the 3M® preformed crowns for primary molars were taken and the measurements were compared to that of the teeth and the crowns.

*Key words:* Crown, tooth size *Results:* 

- —In the Moroccan and Spanish group the mesiodistal size of the first and second primary molars were practically all consistent with those of the 3M crowns, and there were very few cases of molars that were smaller that the number 2 crowns.
- —In the Ecuadorian group, the mesiodistal size of the first and second primary molars matched the measurements of the 3M crowns but there were cases of girls who needed smaller crowns and boys who needed bigger crowns than those offered by 3M.

Conclusions: Carrying out wider studies is necessary in order to have tables with reference values that can be applied to these population groups. It is also necessary to have industrial relations in order to advise companies on the need to manufacture crowns that adapt to the values of the current population in our country.

## 3. STUDY ON THE RELATIONSHIP BETWEEN THE ANGLE OF LOWER THIRD MOLARS AND MANDIBLE LENGTH

#### Precioso MA, Rico A, Beltri P, Costa F, Pérez F Universidad Europea de Madrid

*Introduction:* The third molar is the last tooth to erupt and it is the tooth with the most associated pathologies, which is reflected in both eruption and the high rate of agenesis and anomalies in shape and size.

Numerous authors have studied the relationship between eruptive problems of third molars and the size of the arch and of the molars, orthodontic treatment, etc. One of the factors that most affects the retention of third molars is their position within the lower jaw.

*Objective:* The aim of this work is to evaluate the angulation of the lower third molar with regard to the length of the lower jaw at different ages.

*Material and methods:* A total of 54 radiographies were used of children aged between 9 and 17 years who had attended the Precioso Dental Clinic for an evaluation of their orthodontic treatment needs.

Lateral teleradiographies were chosen in which the third molar had a formed crown, stage 5 on the Nolla scale. The following variables were registered: sex, age, angle of the crown of the third molar (measurement of the midline of the crown with Frankfurt plane transferred to the mandibular ramus) and the length of the lower jaw.

*Results:* This work revealed that the angle of the crown of the mandibular third molar increases with age, and these angle changes appear earlier in girls.

A relationship was not found between the angles and lengths of the lower jaw.

Conclusions:

- —In girls the change in the angle of the third molar is earlier.
- —The growth of mandibular length is not a reference point for determining the angle of the third molar.
- —The growth of lower third molars roots is related with angulation.

## 4. EVALUATION OF DENTAL ANXIETY DURING THE FIRST VISIT OF PEDIATRIC PATIENTS

#### Vilà Torelló MM, Fernández Cuchi S, Pascual Sancho M, Brau Maire I, Sánchez Molins M

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Introduction: Dental anxiety can be objective or subjective. This anxiety can become pathologic if the response becomes exaggerated and if the feelings of fear are disproportionate, which can lead to patient cooperation being inadequate.

The degree of anxiety during the first visit a pediatric patient will help to determine what management techniques will have to be applied in order to carry out the treatment.

*Objectives:* To evaluate pediatric patient anxiety during the first visit and to study what influences this anxiety.

*Material and methods:* In order to carry out this study we put together some questionnaires with the following sections: year of birth, sex, reason for the consultation, brushing frequency and level of anxiety using the Varni-Thompson facial images scale.

This was used with 100 patients who were aged 4 to 18 years and who attended the dental hospital of the Universitat de Barcelona during the 2011-2013 academic years. They were completed by 5th year students who were on the Integral Pediatric Dentistry course.

The data obtained was introduced and classified by the Microsoft Excel program and analyzed using percentages.

The degree of anxiety was classified into 5 groups, from zero anxiety to 4 (from less anxiety to more).

Results

- —Sex: Out of a total of 100 patients, 53 % were males and 47 % were females.
- —Anxiety: Out of a total of 100 patients, only 3 % had anxiety level 3 and 2 % had anxiety level 4 (these patients were frightened of pain and of the unknown).
- —Sex-anxiety relationship: We did not find any relationship.
- —Age-anxiety relationship: The group with the greatest degree of anxiety was aged 6-8 years, followed by the 9-12 group.
- —Reason for the consultation-anxiety relationship: Patients with higher levels of anxiety were those who attended due to pain, or for treatment of a tooth with symptoms.
- —Brushing frequency-anxiety relationship: A greater degree of anxiety was found in patients who brushed less frequently.

Conclusions: We found very few patients with very high or extreme levels of anxiety, but these patients were aged 6-8 years, they brushed infrequently and they were in pain.

We need to widen our sample in order to obtain values that are more representative of our society.

#### CASE REPORTS

## 5. NEW NON-INVASIVE OPTIONS FOR ORAL REHABILITATION IN PEDIATRIC DENTISTRY: CAD-CAM TECHNOLOGY

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*Introduction:* Dentinogenesis imperfecta is a hereditary disorder that manifests clinically as severe attrition

affecting all the teeth. This condition in young children often entails a complex treatment plan that is aimed at restoring the vertical dimension, function and aesthetics. The new materials that have appeared, such as nano-ceramic resin, permit considering the oral rehabilitation of younger patients as having "lasting provisionality".

*Objective:* To describe the technological and clinical procedures carried out during the oral rehabilitation of a 12 year-old affected by dentinogenesis imperfecta.

Material and methods: A multidisciplinary team established the treatment plan. The team included a professional from the master's degree course on Adhesive Aesthetic Dentistry, an expert on the use of new techniques, and other professionals from the Pediatric Dentistry Master's degree, who were experts in managing pediatric patients.

Individual crowns were elaborated using CAD-CAM technology and the material used was nano-ceramic resin (Lava- Ultimate- 3M). Once the material had been prepared, it was sent to a laboratory for final makeup and characterization. The clinical phase was carried out in various sessions, which were spaced out in order to allow the child to adapt to the new vertical dimension.

*Results:* Oral rehabilitation with this new non-invasive technique, achieves an increase in the vertical dimension as well as a restoration of function and aesthetics over a period of three months.

Conclusions: The application of this type of material permits carrying out non-invasive work, as no dental preparation is carried out, which is of considerable advantage at a young age.

## 6. DIFFERENT APPROACHES FOLLOWING THE LOSS OF UPPER INCISORS IN THE PRIMARY DENTITION

#### Gaspar Cuevas AM, Fernández Miñano E, Pérez Silva A, Teruel Fernández J, Germán Cecilia C Universidad de Murcia

Introduction: The premature loss of primary teeth can lead to not only aesthetic problems but also to phonetic problems, due to the loss of space and tongue thrusting. Many factors are involved in the decision to place a space maintainer such as: age, stage of development of the permanent tooth and other factors such as crossbite. Therefore, when making a decision we not only base this on an intraoral examination but also on radiologic examination. The two main ways of maintaining the space are by using a fixed or removable appliance.

*Objectives:* To evaluate the use of fixed maintainers as opposed to removable maintainers.

Material and method: We present three case reports of premature loss of anterior teeth of children aged 2 to 7 years caused by traumatic injury. Our treatment plan included observation and functional/aesthetic rehabilitation. We decided to delay the 2 year-old patient's treatment. He was monitored every two months until his primary upper second molars had erupted. The other cases

were rehabilitated using a fixed space maintainer that was made up with bands to the primary upper second molars, and the anterior missing teeth with resin or with a Hawley plate with planes and a central screw if the patient had crossbite in addition to a missing anterior tooth

*Conclusion:* Providing there is no loss of space or crossbite, we prefer the use of fixed space maintainers as opposed to removable plates.

## 7. TREATMENT OF TWO EMBEDDED UPPER CENTRAL INCISORS USING MAXILLARY EXPANSION

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Introduction: Embedded teeth have different etiologies, among which obstruction of the eruption path can be a cause, or the ectopic position of the tooth buds or the loss of space in the arch. It is more common to find an embedded tooth in the upper than in the lower jaw, and especially the upper central incisor. This situation is of concern to both parents and child, given the importance of the central incisors in the aesthetic appearance of a child's smile.

Palatal expansion appliances are traditionally used for correcting transverse bone problems (posterior crossbite) by means of expanding the upper jaw. This appliance however can also be used for treating retained central incisors.

Objective: To evaluate the result of orthodontic expansion for treating two embedded upper central incisors.

Material and method: Two clinical cases are presented in which orthodontic expansion was carried out using an expander as treatment for an embedded upper central incisor.

Case report 1: nine year-old patient with retention of the upper left central incisor (2.1). Lack of space in the upper jaw (no crossbite) and class III molar relationship. Treated with a McNamara-type expander.

Case report 2: eight year-old patient with retention of the upper right central incisor (1.1). Class II molar relationship and maxillary compression (no crossbite). Treated by extraction of primary teeth (5.1 and 5.2) without success. Further treatment with a McNamaratype expander.

*Conclusions:* Rapid expansion of the upper jaw can be the treatment of choice for embedded upper central incisors.

## 8. CAN A DENTAL SCANNER HELP WITH THE DIAGNOSIS OF ERUPTION DISTURBANCES? CASE PRESENTATION

Hurtado V, Beltri P, Bartolomé B, Gallego A, Gómez A

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Premature root resorption of primary second molars is frequently associated with the ectopic eruption of permanent molars. However, we may find cases in which root resorption of the molars has taken place but there has been no close proximity with premolar tooth bud. There are even cases in which a premolar appears in an ectopic position. Conventional panoramic radiographies can help diagnose the possible causes, although techniques such as dental scanning provide more precise information of the position of the tooth bud and of the primary precursor.

We present the case of a patient with ectopic eruption of a second premolar and premature resorption of the primary second molar. A dental scan was carried out in order to study the possible causes of the ectopia and to obtain a more precise diagnosis.

#### Objectives:

- . To review the etiology and prevalence of ectopic eruptions of permanent teeth.
- . To study the different methods that are used for reaching a precise diagnosis of this abnormality.
- . We will present a case of ectopic eruption of the second premolar backed up by the diagnosis from a dental scanner.

*Material and methods:* We will review articles and journals using Medline, Dialnet, Google Scholar.

Key words: ectopic eruption, atypical resorption, dental scanner.

Conclusions: The dental scanner is a very useful tool for diagnosing eruption problems. It provides imaging that is more precise but without a very significant increase in the amount of radiation received by the patient.

## 9. ORAL MANIFESTATIONS OF VON RECKLINGHAUSEN DISEASE. A CASE REPORT

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Introduction: Von Recklinghausen disease, also known as type 1 neurofibromatosis (NF-1), is an autosomal dominant hereditary disorder due to disturbances to the long arm of chromosome 17. It is one of the most common benign tumors of neural crest origin with a prevalence of 1 out of every 3.000 births. Of the patients with neurofibromatosis 4-7 % have oral manifestations that tend to be unique, small in size and nodular, with a greater incidence in the tongue. The case is described of a girl aged 4 years with tongue and neck plexiform neurofibroma.

#### Objectives:

- 1. To recognize the clinical characteristics and manifestations of the pathology.
- 2. To determine the intraoral repercussions of von Recklinghausen disease.
- 3. To evaluate the orodental diagnosis and treatment of the patients affected.

*Material and methods:* The case is presented of a patient with Type 1 head and neck neurofibromatosis who was treated by the department of Oral and Maxillofacial Surgery of the Hospital Universitario La Paz in Madrid and also by the official head of integrated dental care for children with special needs.

Conclusions: Pediatric dentists can be the first professionals to observe a manifestation of von Recklinghausen disease. It is therefore necessary to understand this pathology and its oral complications and to establish a proper differential diagnosis of any intraoral inflammation in order to carry out early treatment that will not interfere with either the functional or the aesthetic features of the child.

#### 10. INTRAVENOUS KETAMINE FOR CHILDREN AGED 5-14 YEARS AND LOCAL ANESTHESIA

#### Álvarez-Pérez D, Escassi L, Carleos C, Santana-Acevedo M, Álvarez-Conde J

Introduction: In some exceptional cases behavior management of certain children makes following a special treatment protocol necessary. On many occasions we can resolve the behavior with therapeutic techniques for pediatric dentistry that range from psychological preparation to sedation with nitrous oxygen. However, there is certain behavior that is impossible to manage and for this sedation using Ketamine comes into its own.

Objectives: The main objective in these cases is to give priority treatment to patients requiring acute therapy and to abscesses, pulpitis and acute periodontitis. Other secondary objectives have been related to preventative therapy, conservative dentistry and interceptive orthodontics and on some occasions extractions followed by fixed or removable maintainers.

Material and method: This presentation covers the management of children aged 4 years to 14 years over a period of about 20 years. The sample of these cases has an approximate mean of 10 cases per year. The selection method followed has always been the failure of other methods for managing behavior in these children, in our clinic as well as in other clinics.

Results: In the section of results we would like to stress that what is most important is the absolute possibility of whatever type of dental treatment, either in an acute or chronic phase. And to highlight that while all dental treatment can be done, we should prioritize to the full the "operative time", and the team should be made up of at least three people, in addition to an anesthetist who will be personally in charge of venous access, monitoring with a pulse oximeter and reflex control.

Conclusions:

- -Management of whatever type of behavior
- -Management of whatever type of dental operation
- —Operative time no more than 30 minutes
- —After the treatment 3 to 5 hours are needed for reestablishing limb coordination.

- —No eating or drinking for a minimum of 6 hours beforehand
  - -Achieve amnesia and memory loss by child

## 11. IMPAIRED ERUPTION DUE TO THE ERUPTION OF BILATERAL MESIODENS: A CASE REPORT

### Paz M, Muñoz L, Beltri P, Albero G, Méndez M Universidad Europea de Madrid.

Introduction: Supernumerary teeth are a relatively common disorder of odontogenesis, characterized by an excess number of teeth. They can be single, multiple, uni or bilateral and appear in both dentitions. The etiology of hyperdontia continues being studied today but the most accepted theory is hyperactivity of the dental lamina.

A case is presented of a six-year old male who was seen on the Master's degree course of the UEM with erupted bilateral upper mesiodens.

Objectives:

- —To determine the percentage of erupted bilateral mesiodens in the permanent dentition.
- —To evaluate the different treatment protocols according to the clinical conditions.

Material and methods: In order to obtain the articles, the databases of Pubmed and Compludoc were reviewed using the keywords: supernumerary teeth, mesiodens, hyperdontia. Articles published between 1996 and 2013 were chosen.

Results: According to the different authors, the incidence of hyperdontia in the Caucasian population wavers between 0.45 and 3.8 %. The most common supernumerary teeth (0.15-2.05 %) are mesiodens located in the anterosuperior region, between the central incisors, and they tend to be more common in males than in females. They tend to be a casual finding. However their presence can produce disturbances such as dental retention, displacement, rotation, overcrowding, interincisal diastemata, root disturbance, cysts and they may even erupt into the nasal cavity. In the permanent dentition the most common complications tend to be eruption delays and displacement of the permanent incisors.

The patient attended the clinic as a result of a disturbance in the position of the permanent upper right incisor and, according to the mother, because his new teeth had a strange appearance. The clinical examination revealed bilateral upper central mesiodens that were completely erupted. After the pertinent radiographic tests, an orthopantomography and an occlusal radiography, the diagnosis of mesiodens was confirmed. In addition impaired eruption and displacement of the permanent teeth was observed. We decided to extract both mesiodens.

Conclusions:

- 1. Bilateral mesiodens continue to be a very common pathology, and 15 to 25 % tend to completely erupt.
- 2. The dental approach is conditioned by the type and position of the mesiodens but in these cases early extraction is the treatment of choice.

### 12. GEMINATION OF TOOTH 83. A CASE REPORT

### Ramos Salazar YC, Torres L, Costa F, Beltri P, Salmorán P

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Introduction: Dental developmental disturbances can give rise to a large variety of pathologies depending on the moment the etiological factor begins to act. These abnormalities occur in very early stages of intrauterine life, when the formation of embryonic structures such as the dental sac, papilla and dental organ take place which, during the histodifferentiation process, will lead to the formation of structures such as enamel, dentin and cement. Tooth anomalies are a deviation from normality that may affect the number, size, shape, structure and color of the teeth affected. Size anomalies refer to teeth that have a greater or smaller size than normal. Gemination is an attempt of a tooth bud to divide during odontogenesis. It is an incomplete division of a single tooth bud that leads to a bifid crown that may be totally or partially joined to a root or single root canal. The etiology is multifactorial and it encompasses congenital and systemic factors. The location is different in both dentitions.

This poster communication reviews the characteristics of gemination and the possible treatment options by using a case studied at the UEM.

Objectives:

- 1. To review the etiological and clinical characteristics together with the diagnosis of tooth gemination of primary teeth.
- 2. To establish a differential diagnosis with other dental anomalies.
- 3. To suggest the most suitable multidisciplinary treatment for tooth gemination cases in the primary dentition and to establish the prognosis.

Material and methods:

- 1. A literature review of pediatric dentistry journals with international impact using the databases of PubMed, Medline, Google scholar and the archives of the digital library of the UEM.
- 2. Selection of a case report from the Pediatric Master's degree course of the UEM with the relevant registers as well as carrying out a treatment and follow-up plan.

Conclusions: The treatment of these types of anomalies should be from a comprehensive point of view according to the clinical and radiographic diagnoses. In the case presented, the treatment was multidisciplinary involving pediatric dentists and orthodontists, which permitted correcting a pathology and obtaining harmonious and functional occlusion while solving the issue of visual appeal.

# 13. ACTION PROTOCOL IN UCV FOR PEDIATRIC DENTISTRY TREATMENT UNDER CONSCIOUS SEDATION WITH NITROUS OXIDE

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Introduction: The subject to be discussed in this poster is the protocol for action that we follow at the Universidad Católica de Valencia for treatment carried out under sedation with nitrous oxide. With regard to conscious sedation with nitrous oxide in the dental office, there are no autonomous regulations in the Community of Valencia as to its use. Its use is neither limited nor prohibited. We refer to the regulation AA08/2008 of the General Council of Dentists and Stomatologists.

The sedation team is conscious that what we use in the UCV is: McKesson MC1.

*Objectives:* To carry out treatment under conscious sedation of patients showing very little or no cooperation regarding basic behavior management techniques.

Material and methods: The patients who were considered candidates had obtained a Frankl behavior rating during their first visit of A1= 0 (treatment cannot be carried out unless physically restrained) or 1 (the treatment cannot be carried out without undue delays. Lack of cooperation).

Our action protocol based on a review of the literature consists of:

- 1. Complete medical history, Frankl behavior rating (0,1). Evaluation by anesthetist (patients ASA I and II).
  - 2. Treatment plan.
  - 3. Informed consent by parents.
  - 4. Instructions before and after treatment.
  - 5. Inform parents on protoxide.
  - 6. Treatment.
  - 7. Follow-up visits.

*Results:* Nitrous oxide helps us work in a convenient and safe fashion. It is essential to have informed consent and an action protocol so that the process is correct. Given that an anesthetist is involved there is maximum safety.

Conclusions: The use of this technique has many advantages: reduction of anxiety and fear, control over involuntary movements of the child, there is communication and cooperation between the child and the professional, the action has a rapid effect and recovery is quick.

We recommend this technique for patients who cannot be treated using basic behavior management techniques and in order to achieve future cooperation without sedation.

#### 14. FACIAL ASYMMETRY. A CASE REPORT.

#### Sacaluga B, Fernández de Soria M, Costa F, Torres L, Albajara L

Universidad Europea de Madrid

Introduction: The definition of asymmetry implies a lack of similitude of parts or organs that correspond to the opposite side of the body that normally are similar. Regarding the face this implies a lack of balance that affects size, shape and location of structures of the face when compared with the contralateral side, in the sagittal plane. It can be considered a characteristic trait of the human species if within in normal ranges.

The diagnosis of facial asymmetry is of great importance as treatment changes considerably depending on the reason for the deformity. The origin can be dental, skeletal or functional, or a combination of any of these three. There are also etiological, genetic, environmental, functional and developmental factors.

This poster communication presents the case of a 3-year old patient whose medical history included a cranio-facial injury during her first year, associated with facial asymmetry due possibly to environmental reasons.

Objectives:

- —To understand the general protocol for carrying out the correct diagnosis of facial asymmetry, that evaluates the different origins and factors.
- —To chose the ideal therapeutic option for each type of facial asymmetry.

*Material and method:* Information available on PubMed, Medline was obtained together with information from the Universidad Europea de Madrid and the Universidad Complutense de Madrid.

Most of the material reviewed was made up of different international journals published over recent years with high impact studies on asymmetries.

Articles were excluded on pathologies related to craniofacial syndromes, and we centered our revision on environmental or functional factors.

Conclusions: In order to diagnose facial asymmetries one should be familiar with the protocol that has to be followed. In order to come up with the correct treatment plan, a full medical history is necessary, as this will determine any possible etiological factors. Also necessary is a detailed radiologic evaluation and the correct management of all the diagnostic methods at our disposal.

#### 15. MUCOGINGIVAL PYOGENIC GRANULOMA ASSOCIATED TO A TRAUMATIC LESION. ATYPICAL PRESENTATION IN A PEDIATRIC PATIENT

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Introduction: Pyogenic Granuloma (PG) or lobular-capillary hemangioma is defined as a reactive hyper-plastic inflammatory lesion which is non-neoplastic in nature. It is the most common lesion of the oral cavity and it forms as a result of an exaggerated response to different stimuli: local irritants, traumatic lesions, hormonal factors and certain drugs. It is most commonly found in the vestibule of the mouth, although it has also been described on the lips, tongue and oral mucosa. This case report illustrates an atypical presentation that affected the mucogingival complex located in the anterior lingual region of the mandible, and that took up a large part of the floor of the mouth of a pediatric patient from the East of Africa.

Case report: We describe the clinical and histopathologic characteristics of an intraoral lesion that had been developing over 12 months in an African child aged 14

years who attended the department of pediatric dentistry of the Soweto Hospital in Arusha (Tanzania). The patient had an exophytic pendunculated asymptomatic lesion that was kidney shaped with a lobulated edge, a 15-20 mm diameter, and which was red-grey in color. It was located in the anterior lingual region of the mandible (teeth 42-43) and it was inserted into the mucogingival junction, on the floor of the mouth, and secondary to a traumatic lesion with a toothpick. The lesion was not painful although there was discomfort due to its considerable growth. Conservative surgical excision was carried out and the area was completely cured. There was no recurrence over the following two years. The anatomic-pathologic examination pointed to a diagnosis of pyogenic granuloma.

Discussion: The etiopathogenesis of GP it still not completely known but it would appear that vascular morphogenesis is involved and that a traumatic lesion, hormonal changes (estrogen) or local irritants could favor the release of angiogenic factors. Clinically the differential diagnosis of GP includes: peripheral giant cell granuloma, peripheral ossifying fibroma, fibroma, peripheral odontogenic fibroma, hemangioma, pregnancy tumor, granulation tissue, inflammatory gingival enlargement, Kaposi's sarcoma, bacillary angiomatosis, angiosarcoma and non-Hodgkin's lymphoma. During the clinical diagnostic process glandular disturbance was also considered given the strange location of the lesion close to the floor of the mouth.

Conclusion: This case report describes an atypical presentation of a lobular-capillary hemangioma in a pediatric patient associated with a traumatic lesion, with a very uncommon location, which has not been described previously in the literature.

#### 16. MULTIPLE AGENESIS. A CASE REPORT.

#### Piñeiro Hernáiz M, Salcedo Pérez L, Vilar Rodríguez C, Chamorro J, Bartolomé B

Universidad Europea de Madrid

Introduction: Tooth agenesis is defined as the clinical and/or radiologic absence of a primary or permanent tooth in the oral cavity with no antecedents of extraction, avulsion or exfoliation. Its prevalence varies depending on demography and geographic profiles, varying between 2.6 and 11.3 % and affecting more women than men.

The case is presented of a male patient aged 14 years with multiple agenesis who only had upper central incisors and all his permanent first molars.

Objectives:

- 1. To establish the diagnostic guideline for a case of multiple agenesis.
- 2. To evaluate the therapeutic needs and most suitable action protocol for multiple agenesis.

*Material and methods:* A literature review was carried out by searching the scientific databases of Pubmed, Medline, using the keywords: oligodontia, severe hypodontia, tooth agenesis and choosing articles between 2005 and 2013.

Results: The different studies showed that both dentitions could be affected, although this is much more common in the permanent dentition. The teeth with a much higher rate of agenesis, with the exception of the third molar, are the second premolars of the lower jaw and the lateral incisors of the upper jaw.

The etiological factors that most stand out are local factors, and general and genetic factors (associated to syndromes).

A male patient aged 14 years attended the dental clinic of the pediatric master's degree course of the UEM. After a clinical examination we observed that he only had permanent upper central incisors and permanent upper and lower first molars and the rest of his teeth were of the primary dentition. The radiographic examination confirmed a diagnosis of multiple agenesis, and the issue of the best treatment for him was then raised.

Prosthetic rehabilitation or implants are among the most accepted therapies when a patient has finished growing. We decided to place composite veneers on the upper central incisors and to monitor the resorption of the primary teeth in order to carry out prosthetic rehabilitation at the best moment.

Conclusions:

- 1. Patients with multiple tooth agenesis should undergo a genetic study in order to rule out syndromic agenesis. The most common syndromes include ectodermal dysplasia. In this case of ours, no disturbance was detected after carrying out a genetic study.
- 2. We put together a treatment plan to conserve those teeth present while taking into account the aesthetic requirements until a second phase of prosthetic and restorative treatment was needed.

#### LITERATURE REVIEW

### 17. DUCHENNE MUSCULAR DYSTROPHY. A CASE REPORT

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*Introduction:* Muscle dystrophy forms part of a variety of genetic disorders that are associated with various gene mutations that lead to progressive weakening and muscular atrophy.

Within these, Duchenne muscle dystrophy (DMD) is a neuromuscular disease that is genetically determined by a disorder found on chromosome X with a recessive pattern, associated with CPK levels that cause genetic weakening of the muscles and which may compromise the life of the patient at a young age.

Patients with DMD can have a lower than normal cognitive ability and delays in both motor and language development.

With regard to the mouth there is an accumulation of plaque and calculus due to muscle weakness that progresses with inflammation of the gums. There can be disruption in the form, number and eruption of second molars. With regard to occlusion, anterior and posterior open bite is common and associated with lip incompetence, oral breathing, macroglossia and tongue thrusting. Dental treatment of these patients should therefore be carried out by a pediatric dentist.

The case is presented of a 7 year-old child with DMD who attended the Masters degree course of pediatric dentistry of the UEM for an oral examination and treatment.

Objectives:

- 1. To understand the etiology, clinical and dental characteristics of DMD.
- 2. To establish a management protocol for the dental treatment of these patients.

Material and methods: A review of the literature was carried out and a search was made of children with DMD between 2000 and 2013 using the databases of Medline, Pubmed, Google scholar and Dialnet.

Keywords: Duchenne Muscular Dystrophy, Dental, Oral health.

Conclusions:

- 1. DMD is a neuromuscular disorder that, given its clinical characteristics (delayed motor and psychic development) is difficult to manage dentally.
- 2. Pediatric dentists should be familiar with all the resources available to manage physically and psychically these disabled patients so that they can be treated properly.

## 18. SEVERE INTRUSIVE LUXATION: PARAMETERS FOR DETERMINING TREATMENT

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Introduction: Intrusive luxation is considered to be the axial displacement of a tooth into the alveolar socket. It has a low prevalence rate in the permanent dentition representing 0.3-1.9 % of all traumatic dental injuries.

The etiological factors are many but the most common are bicycle falls, and 60 % of all luxations occur at home. There is a male predominance and a tendency to be around the age of 12 years.

Some 90 % of upper incisors are affected by this type of lesion and treatment depends on the degree of root development and the seriousness of the intrusion.

*Objective:* To analyze the therapeutic decisions taken by authors in cases of intrusive luxation and to ascertain if this affects how the injury evolves and the complications that arise.

Material and methods: A review of the literature was carried out using the Pubmed, Cochrane and Lilacs databases of articles that have appeared over the last 12 years. The keywords were "intrusive luxation, traumati-

cally intrude permanent, surgical reposition, orthodontic extrusion, dental trauma."

*Results:* Forty-five articles were finally selected that met the inclusion criteria.

The total number of teeth with severe luxation that appeared in these articles were 40, out of which the most common complication was pulp necrosis, independently of the variables in the case.

There were 23 teeth with open apexes of which 11 were treated with orthodontic repositioning and 3 with surgical repositioning. With 9 teeth re-eruption was allowed which occurred between 3 weeks and 7 months. In these groups the most common complication was obliteration of the root canal.

Seventeen teeth had a closed apex, and of these 7 teeth were treated with surgical repositioning. With 2 teeth re-eruption was allowed, and 8 teeth were repositioned orthodontically. In all cases root canal treatment was carried out within a time period that varied between 5 days and 3 weeks. Only in 5 cases were there root resorption-type complications.

Conclusions: Age did not influence either treatment modality or the appearance of complications in the open apex group of teeth. In the group of teeth with a closed apex, the complications were less frequent given that root canal therapy was carried out promptly.

#### 19. FETAL ALCOHOL SYNDROME: CRANIOFACIAL AND DENTAL DEVELOPMENT OF PEDIATRIC PATIENTS

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Introduction: Fetal alcohol syndrome (FAS) is a set of signs and symptoms that can be observed in children exposed to alcohol during the prenatal period. In other word, it is due to the mother drinking large amounts of alcohol during her pregnancy. This congenital condition is characterized principally by a distinctive pattern of craniofacial malformations, and by physical and mental retardation. In addition deficiencies in the central nervous system are reflected in behavior and learning difficulties, which can affect interpersonal relationships with these patients, and their quality of life.

Due to the increase in the incidence and prevalence of FAS in developed and developing countries, pediatric dentists should be familiar with this condition, with its orofacial characteristics, and associated physical and psychological disorders, which may affect a dental treatment plan.

Objective: To highlight the clinical importance of prompt recognition by pediatric dentists of the craniofacial, behavioral and cognitive characteristics that are inherent in pediatric patients with FAS, and which may limit their therapy.

Material and methods: A literature search was carried out in Medline, Pubmed, Science Direct and Bon in March 2013, limited to the last 10 years and with the following keywords: fetal alcohol syndrome, craniofacial abnormalities, dental abnormalities and odonto-

genesis. A total of 15 articles were chosen according to the inclusion criteria established by the authors.

Conclusions: The consumption of alcohol during pregnancy has a negative effect on a child, such as growth delays, facial dysmorphia and damage to the central nervous system.

There is no exact relationship between the amount of alcohol consumed during the prenatal period and the seriousness of these modifications. An understanding of the characteristic changes of FAS and a medical history, will allow a pediatric dentist to diagnose the syndrome, and establish preventative and therapeutic measures. These should adapt to the particular needs of the patients, their orofacial changes and their behavioral and cognitive disorder.

## 20. CHARACTERISTICS OF THE PEDIATRIC TOOTHBRUSHES AVAILABLE IN THE SPANISH MARKET

### Moreta A, Gabriela Samayoa A, Laplana I, Lorente A, Sáez S

Universidad Internacional de Cataluña

Introduction: Controlling bacterial plaque is essential for correct oral hygiene, and the way to achieve this is by brushing teeth from an early age. As oral health professionals we should be familiar with the characteristics of the pediatric toothbrushes available in the Spanish market, so that we can recommend the most suitable toothbrush, according to age, characteristics of the teeth and the abilities of each patient.

Objective: To determine the ideal characteristics of a toothbrush for children aged 0 to 12 years and to group these according to the existing manufacturers in the Spanish market.

Materials and methods: A search was carried out in the databases of Pubmed and Web of Science with the following criteria: articles in English from 1999-2012 with the following keywords: toothbrush, oral care, dental care, electric toothbrush, oral health care, toddlers, childhood. In addition a search was made in various chemists and specialized stores selling different brands for children that included toothbrushes in the Spanish market.

Conclusions: A child's toothbrush should have extrasoft or soft bristles and it may or may not have rounded filaments. It should have an anti-slip grip, and be ergonomically designed and with a narrow head. After this research we can conclude that all the toothbrushes studied, Nuk, Oral B, Colgate, Vitis, Chicco, Mam, TePe, PHB, etc. had the necessary characteristics. With a proper technique and good habits the correct oral health of our patients can be guaranteed.

#### 21. HOW TO PREVENT CARIES IN YOUR BABY

Fernández Mafé M, Rodríguez Llorca S, Juan Ruiz L, Traver Ferrando C, Ausina Márquez V

Universidad Católica de Valencia

Introduction: Early childhood caries is considered a Public Health problem and for this reason the WHO has highlighted the need to adopt a preventative approach so ECC can be avoided, and if underway, so that an early diagnosis can be made.

Objective: To educate future parents on oral care so that they can look after the orodental health of their baby.

Material and methods: In order to put together these recommendations, a search of the literature was made in the Cochrane library and the databases of Medline and Ebsco, using a combination of the following keywords: dental caries, childhood, anticipatory guidance, prevention, management, dental care, bottle feeding, breast feeding on demand, early childhood caries. The articles published from 2010 to date were reviewed and those that adapted best to the objectives of the poster were chosen

Conclusions: Given the current high rate of early childhood caries, we have to ask ourselves how we can prevent this situation. Pediatricians are in a position to make the first contact with a baby and its parents. Interdisciplinary cooperation is therefore very important in order to manage the correct oral health of a baby and this poster helps to achieve this care.

## 22. ECTOPIC ERUPTION OF CANINES WITH ROOT RESORPTION OF LATERAL INCISORS: A CASE REPORT

#### Guardon Cruz T, Navarro Jiménez C, Bartolomé Villar B, Costa Ferrer F, Correa Rancel E

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*Introduction:* After third molars, canines have the most eruption abnormalities, and this includes impacted or ectopic eruption.

The prevalence rate of ectopic upper canines varies between 1-3 %. With regard to sex, it has been observed that this occurs more frequently in women than in men, and that the proportion is 2:1.

The etiology of impacted teeth is multifactorial and difficult to define. Diagnosis is difficult as they tend to be asymptomatic. As from the age of 8, annual monitoring of canine eruption is recommended by means of radiographies and palpation.

The sequelae related to impacted canines are important given the unfavorable prognosis of any root resorption in adjacent teeth, commonly lateral incisors that may even be lost.

The case is presented of a boy aged 10 years, who attended a clinic as a result of ectopic canine eruption, with severe resorption of the adjacent lateral incisors, leading to their loss.

Objectives:

- —To find out the most reliable diagnostic methods that can currently be used to analyze eruptive anomalies, especially of canines.
- —To analyze the most efficient preventative treatment when there is a risk of root resorption of adjacent teeth.

—To establish the different therapies for this anomaly and to highlight the most conservative treatment possible once this resorption has taken place.

Material and method: In order to find articles for this revision, the following databases were used: Google Scholar, MEDLINE, GoPubMed, Cochrane Library.

The keywords used for the search were: "ectopic", "eruption", "canine", "root", "resorption", "includes". *Conclusions:* 

—As a conclusion we would like to highlight the importance of establishing an early diagnosis and prompt treatment for ectopic eruption of permanent canines in order to prevent possible sequelae.

—Extraction of primary first molars currently figures among the different early treatment alternatives.

#### 23. XYLITOL UPDATE

#### Traver Ferrando C, Fernández Mafé M, Juan Ruiz L, Rodríguez Llorca S, Ausina Márquez V

Universidad Católica de Valencia

*Introduction:* The daily consumption of xylitol has been proposed for preventing dental caries. However, all its uses in the field of dentistry should be known.

Objectives: To describe the action mechanism of xylitol, to determine its therapeutic uses, to determine the suitable dose for safe use in children, to describe the different vehicles for its clinical application and to find out what products contain this so it can be administered orally.

*Material and methods:* A review of the literature was carried out in different databases: Pubmed, EBSCO, Teseo, Guideline and WOK. The keywords used were: Mutans Streptococci-Transmission-xylitol- Caries prevention-Long term effects-tooth eruption- oral health-Mother-child transmission- Pregnancy- Early childhood- maximum tolerated dose- preventive dentistry.

Conclusions: The chemical mechanisms of xylitol are still unknown but its action can be explained in three ways: salivary effects, microbiological effects and bioinorganic effects. In addition to being useful for preventing dental caries, preventative effects have also been described with regard to periodontal diseases such as gingivitis and respiratory diseases or ear infections (otitis media). Depending on the authors, the recommended dose varies, but all are lower than those with adverse effects. The vehicle used for administering xylitol tends to be convenient for the patient so that better results are achieved. Despite all the indications for its use there are some limitations.

## 24. REIMPLANTATION OF AVULSED TEETH: REVIEW OF THE LITERATURE OF PUBLISHED CASES

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*Introduction:* Avulsion is one of the most serious traumatic dental injuries. After reimplantation the prognosis of a tooth will depend on the time elapsed from the avulsion, the medium the tooth was kept in, and the treatment.

*Objectives:* To analyze the published cases of avulsion and to find out if there is any relationship between complications, and the moment these appear, with the treatment carried out and the characteristics of each case.

*Material and methods:* For this revision study a search was carried out in the literature of cases published in PubMed, Medline and Scopus between the years 2002 and 2012, using the keywords tooth avulsion, avulsed permanent teeth, traumatic tooth avulsion, exarticulation and teeth replantation.

Cases referring to primary teeth were excluded, together with those in which the treatment was not specified, and those in which the follow-up time was under a year, and two cases of adults. Finally, a total of 20 clinical cases were analyzed.

The variables studied were degree of root development, conservation medium, time elapsed until the reimplantation, root and socket treatment, splinting, use of systemic antibiotics, endodontic treatment, outcome and complications.

Results: Out of the total of 10 permanent incisors with an open apex, 3 kept their vitality during the monitoring period. One tooth suffered pulp obliteration at six months, having undergone 10 minutes dry time and root treatment with saline. In another 2 teeth there were no complications over the following 12 months. One of them had 2 hours dry time and the other was reimplanted after intermediate treatment with Emdogain®. The other 7 teeth had complications, basically apical abscesses within a period of 2 weeks to 3 months.

Of the 15 teeth with an open apex, one was still vital at 30 months, having been in a transport medium for more than two hours and the root had been treated with serum. With the remaining teeth the author carried out root canal treatment in 4 teeth before the reimplantation, and in another 10 this was carried out in a time period of between 1 week and 3 months. Of the 15 teeth, 12 had complications, the most common being ankylosis and the earliest onset was at 2 months. Ankylosis was associated with a longer elapsed time between avulsion and reimplantation.

*Conclusions:* The earliest complications are associated with longer elapsed time until the reimplantation.

## 25. LEGAL IMPLICATIONS AND PROCEEDINGS FOR PEDIATRIC DENTISTS IN CHILD ABUSE CASES

#### Cabezas Fuentes C, Álvarez Alonso A, Torres Moreta LA, Bartolomé Villar B, Costa Ferrer F Universidad Europea de Madrid

*Introduction:* The concept of child abuse or neglect involves any act, or a lack of care, by parents or carers, that involves serious physical or emotional injuries with important sequelae that may even lead to death.

Given the ambiguity of the clinical picture of the abused child, the therapeutic approach requires a multidisciplinary team in which pediatric dentists have a unique position as they are one of the first to make a diagnosis in these cases.

Despite this, many pediatric dentists are unfamiliar with the most common manifestations of abuse, as well as the legal and social responsibilities with regard to this abuse, and many questions are raised about officially reporting it for various reasons.

This communication consists in a review of the literature in which the action criteria are described before cases of abuse of children and teenagers.

Objectives:

- —To be able to identify and recognize an abused child from the medical and dental point of view.
- —To understand the medical/legal action protocol and to know when to follow it for child abuse cases.

Material and methods: For this literature review, a comparative analysis was carried out of studies and articles published in high impact international dental and medical journals and texts.

Information was searched for in PubMed and the library of the Universidad Europea de Madrid and of the Universidad Complutense de Madrid. The references were collected in this way in order to obtain the necessary literature and documents. Any articles in which dentists were not involved in the examination and prevention of child abuse were eliminated.

Conclusion: Cases of child abuse are very prevalent in society, although many cases remain hidden. For this reason the pediatric dentist is crucial for diagnosing this set of symptoms, as frequently lesions will appear on the face or in the mouth.

For this reason we need to have the necessary clinical knowledge for identifying it, as well as an understanding of the guidelines concerning legal action in order to report it.

### 26. COMPLETE INTRUSION OF A PRIMARY INCISOR. A CASE REPORT

#### Muñoz L, Paz M, Beltri P, Bartolome B, Chamorro M Universidad Europea de Madrid

Introduction: Lesions with a traumatic origin tend to be common in the primary dentition and they represent one of the main reasons for pediatric dentistry visits. They affect 15 to 30 % of the child population in the world under 3 years.

Intrusion is the displacement of the tooth from the alveolar socket. Clinically this can disappear completely into the alveolus, or it may remain partially visible. Depending on the direction of the impact, the permanent tooth germ may or may not be affected.

The case is presented of a 4 year-old male who attended the Master's degree course in pediatric dentistry of the UEM, with the upper right central primary incisor completely intruded.

*Objectives:* 

- 1. To determine the percentage of this type of traumatic injury in the primary dentition.
- 2. To evaluate the treatment protocols according to the clinical conditions present.

*Material and methods:* In order to obtain the articles, the databases of Pubmed and Compludoc were searched using the keywords: intruded, deciduous, dental, trauma, complications, nasal cavity. Those published between 1996 and 2013 were chosen.

Results: Tooth intrusion represents 4.4 to 22 % of traumatic lesions in the primary dentition of the oral cavity. The literature reflects that the teeth that are most affected by this type of luxation are upper primary incisors (93.47 %) and the upper right central primary incisor is considered the tooth most affected (41.3 %).

The patient attended the clinic 8 months after the impact which had been produced by a seesaw which led to the complete intrusion of tooth 51.

Following clinical and radiographic examination, it was observed that the root had perforated the floor of the nasal cavity while the crown could be felt at the bottom of the vestibule by the lingual frenum. 3D imaging showed that the tooth germ of tooth 11 was not completely compromised.

When the registers taken a few days after the injury were compared with the recent ones, no sign of spontaneous re-eruption was seen. Therefore the surgical extraction of the tooth was decided on.

Conclusions: Dental intrusion of primary teeth continues to be a very common emergency. It should be stressed that in addition to taking radiographies, a thorough examination should be carried out. The dental approach will be conditioned by the re-eruption expected, as well as by the complications.

# 27. FIRST VISIT PROTOCOL OF THE PEDIATRIC MASTER'S DEGREE COURSE AT THE UCV. PREVENTION OF BEHAVIORAL PROBLEMS

### Sanchís Forés C, Castillo Carsí M, Cambra Abril M, Onrubia Fuertes X, Rovira Mas E

Universidad Católica de Valencia

*Introduction:* In order to prevent behavioral problems, in our protocol for first visits a medical history is obtained that takes into account the medical/dental data, and the variables of the psychological profile of the child.

During the first visit behavior is evaluated according to the Frankl behavior scale, and the management techniques appropriate for each case are chosen.

*Objectives:* Our objective with the first visit behavior evaluation and the medical history, is to prevent behavioral problems and to carry out the dental treatment properly that has been planned for each case.

We aim to determine what patients can be treated with basic behavior management techniques and which ones are candidates for treatment under conscious sedation with nitrous oxide and/or premedication with benzodiazepine.

*Material and methods:* Action protocol, based on the literature review carried out previously before the methodology:

- Medical history pediatric dentistry master's degree course UCV
- —Medical/dental anxiety test, questionnaire for parents and children
  - Frankl behavior rating scale
- —Acceptance index of dental treatment. Behavior under conscious sedation, when the variables agree:
- Acceptance rate A = 0 or A = 1 based on the Frankl scale from the first revision visit and diagnosis.
- Magnitude of the dental treatment planned, expressed in a need for pulp treatment and/or extraction, at an early age (under five years).

*Results:* The level of acceptance of the first visit becomes an important predictor of behavior during subsequent pediatric dentistry treatment.

The variable with the greatest predictive power regarding a child's behavior is the magnitude of the treatment expected with dental pain.

Conclusions:

- —Pulp treatment and/or extractions included in a treatment plan scheduled for the first visit, worsens the level of acceptance in successive phases of dental treatment.
- —Behavior evaluation as from the first visit helps to prevent behavior problems.
- —When the treatment cannot be carried out due to behavioral problems, inhaled nitrous oxide should be offered as a management technique to lower anxiety, which will avoid the child having a previous traumatic experience.
- —Patients with previous negative experiences will develop behavioral problems in the dental environment at any age

#### 28. THE PACIFIER: THE REALITY OF A MYTH

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Introduction: There is certain controversy on pacifier-sucking habits in our society that make today's parents nervous, leading to queries regarding the advantages or risks that this habit may have for their children.

*Objective:* To resolve by means of simple questions the worries and myths that affect our population and the health of our young ones.

*Materials and methods:* A literature search of the databases of Pubmed and Web of science published between the year 1989-2012 with the following keywords: Pacifier, Sucking habits, malocclusions, breastfeeding, open bite.

Results: The rational use of a pacifier is beneficial providing appropriate recommendations are followed such as: starting the habit 2 weeks after the birth, and ending this at the age of one year maximum, ascertaining any damaging effects on breastfeeding due to the habit, finding the most suitable type of teat and shape

for the oral cavity, and limiting its use in order to prevent future malocclusions such as anterior open bite among other.

Conclusions: After a review of the literature on the advantages and disadvantages of using a pacifier, we are unable to defend or support its use, but we would recommend it is used within certain limits.

### 29. SEDATION VERSUS GENERAL ANESTHESIA IN PEDIATRIC DENTISTRY

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Introduction: General anesthesia and sedation are procedures that can often offer support to professionals as well as patients. The American Academy of Pediatric Dentistry (AAPD), recognizes that for a certain population of patients behavior management techniques are not a viable option. In addition, it recognizes that a population of patients can benefit from sedation or general anesthesia given their need for extensive treatment, or because of situational anxiety, non-cooperative behavior that is not appropriate for their age, immature cognitive function, disabilities or medical conditions.

The situation becomes complicated for dentists when they have to choose between both techniques. Therefore it is very important to understand the basic aspects that should be taken into account before making the choice.

Objective: To carry out a review of the literature that will provide pediatric dentists with useful material, and that can serve as a reference when they need to treat a patient under these conditions.

Material and methods: A search of the literature was performed using the Pubmed database with the following inclusion criteria: articles in English published between the years 2004-2011 with the keywords pediatric, children, dentistry, general anesthesia, conscious sedation, deep sedation, intravenous sedation, dental treatment.

Results: Many dentists try to carry out the treatment under sedation as it is considered a less invasive technique and because, with the right equipment and staff, it can be carried out in the dental consultation room. However, other professionals will decide to use general anesthesia as a first option.

It is important that dentists take into account certain considerations in order to be able to decide on one technique or another. This should take into account the medical history of the patient, ASA status and intervention length. Various studies have demonstrated that in children it is very common to go from conscious sedation to deep sedation or even general anesthesia during the same intervention.

It should be made very clear that, as efficient as sedation may be, there are a series of therapies that can only be carried out under general anesthesia.

*Conclusions:* There is a degree of complexity when deciding to choose between sedation or general anesthesia, as one procedure cannot be said to be better than the

other, but the choice will depend on the procedure and the patient type.

Both procedures are safe and they should be carried out by staff who are qualified in managing and resuscitating pediatric patients. It is important to remark that guidelines and frameworks should always be used and these will depend on the work and staff involved.

### 30. PREVENTATIVE PROTOCOL FOR AMELOGENESIS IMPERFECTA

#### Fiestas Palomino M, Peñalver Sánchez MA, González Rodriguez E

Facultad de Odontología de Granada

Introduction: Amelogenesis imperfecta is a very uncommon disease that falls within the group of hereditary developmental disorders that mainly affect tooth enamel. It affects both dentitions and it can be detected in a child at an early age.

We know that the treatment for amelogenesis imperfecta requires a multidisciplinary approach, however the initial approach in most cases is made by a pediatric dentist

When we come across a child with amelogenesis imperfecta, the difficulties of managing the disorder in itself added to a series of factors such as the child's age, lack of dental experience, perception of the disease, limited ability to cooperate physically during proceedings that require time, parental anxiety and expectations, can complicate the treatment even more.

*Objective:* To suggest a treatment approach and to put emphasis on prevention of the problems derived from the disease, as from when it is first suspected.

Material and methods: The material and methods that we will follow are based on the following premises: A) management techniques, taking into account this emotionally fragile age. B) Preventative techniques: teeth with amelogenesis imperfecta are especially susceptible to caries and wear. The Cambra protocol will be used in a specific fashion so both parents and patient will be totally motivated to follow it, and C) Restoration treatment so that the child is pain free, aesthetic appeal

is achieved and function is maintained or rehabilitated.

Based on the literature that has appeared over the last five years, we will describe the Cambra protocol specifically for young children, who have signs and symptoms of amelogenesis imperfecta.

#### 31. BABY BOTTLES AND CUPS. CHARACTERISTICS TO BE KEPT IN MIND ACCORDING TO AGE

#### Muela G, Gallego H, Sáez S, Cuadros C, Lorente A I Universitat Internacional de Catalunya

Introduction: There are a large variety of products on the Spanish market at the moment that are to be used in conjunction with artificial baby milk for newborn babies and making the best choice is therefore difficult for parents.

*Objectives:* To establish a relationship between the main properties and characteristics that baby bottles and cups should have during the different stages of development of a baby.

Materials and methods: An indexed literature review was carried out in Medline and Pubmed from the year 2002 to date with the following keywords: drinking cups baby, bottle nipples, baby bottle, baby bottle caries. A comparison was also made between commercial brands in Spanish pharmacies on the different beneficial aspects of artificial baby milk.

Results: The teats should be made of silicone or latex and they should have an anatomical shape and continuous flow. They should have an anti-colic valve and holes of different diameters depending on the food that is going to be offered. Both bottle and cup should be made of polypropylene plastic or glass that does not absorb smells or flavors. They should be resistant to high temperatures, easy to sterilize and practical to use for both parents and baby.

Conclusion: Teats with an anatomical shape and continuous flow will ensure the correct development the orofacial cavity. Any bottle habit should be eliminated as from the first year of life, and once the child starts becoming autonomous, by using adapted cups and glasses that can be used as from the age of six months.