

pathology, came to the Pediatric dentistry department of Dental Clinic "G.Vogel" ASST St. Paolo and Carlo, in Milan, for a suspected dental abscess in the upper right maxilla. Oral examination showed a buccal bony expansion over the right primary maxillary region. The panoramic radiograph revealed a osteolytic lesion over the decayed right maxillary first and second deciduous molars; the succedaneous teeth germs were displaced. A CBCT revealed an unilocular lesion with right maxillary sinus involvement. Under general anesthesia, primary molars were extracted and a cyst marsupialization was performed. The marsupialized wound was sutured and a small temporary catheter was positioned in the wound. According to the histologic diagnosis, the bony lesion was a dentigerous cyst. After 6 weeks a fixed orthodontic obturator was inserted in order to avoid the wound closure thus permitting cyst reduction. After three months, the obturator was removed and a multi-brackets fixed appliance was positioned on the maxillary teeth in order to manage the displaced permanent teeth eruption. Regular monthly check-up were scheduled; an archwire sequence was inserted (0014-0016-0018-14x25 Ni-Ti). Ni-Ti coil springs were used to gain more space for the permanent teeth eruption. After six months, a CBCT showed the decreasing bony defects and regenerating bone around the crowns of the involved teeth. After twelve month from the surgery time, a fixed multi-brackets appliance was inserted in the lower teeth. After eighteen months, the upper right canine and premolars erupted and, as soon as an ideal occlusion was achieved, the orthodontic appliances were removed. Removable retention appliances were given to the patient to be worn night time and 2-3 h during the afternoon.

**Discussion:** In case of extensive dentigerous cysts, preservation of the displaced teeth is desirable. Marsupialization is an option more conservative than an enucleation. The orthodontic treatment permitted a spontaneous eruption of the permanent teeth after 12 months.

**Conclusion:** According to cystic size, and the age of the patient, conservative treatment is a favorable treatment modality for extensive dentigerous cyst. The synergy between surgeon and orthodontist is fundamental to achieve the best result for the patient.

### Dental sealant versus fluoride varnish: which is the more effective method to prevent occlusal caries?

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**Aim:** Dental caries is considered one of the major public health issues. The only restorative therapy of the carious lesion does not influence, if not marginally, the infectious disease; if risk factors are not controlled, an increased risk of developing new caries lesions in the near future is documented. Focusing on the concept of caries control by managing the activity of biofilm, fluoride, which is considered the cornerstone of caries prevention, has a key role. Several fluoride vehicles have been developed over the years, each of them with different concentrations, frequency of use and dosages. Recent studies have demonstrated that the application of fluoride varnishes affects positively the progression of the carious lesion, considering this procedure as a "medical approach" to the carious lesion. On the other hand the use of fissure sealant on the occlusal surfaces of permanent molars is a common preventive measure for children and adolescents at high caries risk. The efficacy of pit and fissure sealants has been extensively studied. Several clinical trials focusing on the efficacy of fissure sealant (FS) and the application of fluoride varnish (FV) to prevent caries on the occlusal surface of first permanent molar have been recently reported. The aim of this study is to analyse the available literature to establish which of these two techniques is more effective in caries prevention in children.

**Methods:** Using Pubmed a literature revision was performed, searching for the following keywords: "caries prevention, fluoride varnish, dental sealant". Filters of literature search were: human subjects, aged between 6-12 years old and publication date within 15 years; clinical trials were the type of papers included. The research identified 8 documents, 3 papers were relevant and met the inclusion criteria.

**Results:** included studies having at least 2 years follow-up period. In the Chinese study conducted by Liu (2012), the number of decayed tooth surfaces in all groups were rather small: at 24-month follow-up, the incidence of decayed pit/fissure sites were 1.6% in sealant, 2.4% in fluoride varnish and 4.6% in control groups. The Spanish study by Bravo (2005), found resin sealants better than fluoride varnishes at four years and nine years follow-ups. The incidence of caries on occlusal surfaces in the control group after nine years was 77%, 26.6% in sealant group and 55.8% of in fluoride varnish group. In the Chestnutt's clinical case report (2017), the proportion of children who developed dentine caries on at least 1 first primary molar after 36 months was similar in both the FS (19.6%) and the FV (17.5%) groups.

**Conclusions:** The benefits of both dental sealant and topical fluorides are firmly established based on a sizeable body of evidence. Therefore, from the available literature it is not possible to draw clear conclusions about differences in the effectiveness of the two preventive strategies in preventing or



controlling dental caries on occlusal surfaces of permanent molars. There is some evidence suggesting a slight superiority of fissure sealants over fluoride varnishes application; however the effectiveness of fissure sealants is influenced by material type and length of follow-up.

### Early multidisciplinary therapy of orofacial hypotonia in children with down syndrome

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**Aim:** to evaluate the effects of Castillo Morales method on oral motor function after 1-year treatment period.

**Methods:** a 6-month-old male infant with Down syndrome was treated according to Castillo Morales method. The therapy should be implemented immediately after birth. It consisted of the stimulation of seven motor trigger points (glabella, angle of the eye, side of the nose, upper lip, corner of the mouth, chin, floor of the mouth) with techniques of touching, brushing, rubbing, vibrations and pressure several times a day. This type of exercises activates mimic muscles and evokes movements connected with swallowing, chewing, articulation, closing lips and tongue retraction. Early orthodontic palatal plate therapy ought to be an integral part of the multidisciplinary rehabilitation. The palatal plate is an individually made, removable acrylic device. It induces a sucking effect at the back of the tongue with its button-like stimulator, with a central hole, positioned at the dorsal edge and at the borderline between the hard palate and the velum; and it improves the function of the orbicularis oris muscle with its corrugate texture in the vestibular front part. The plate has been worn about four hours a day, unworn during the night, during meals and speech exercises, with two hour intervals during the use. When the plate was ready to be exchanged for the next one, it was evaluated by the parents/caregivers and by the dentist regarding compliance, problems and benefits. The patient was treated with four plates: a new plate was made every three months. Physical therapy to stabilize body posture and speech therapy to improve language development were performed. At every stage of treatment a close cooperation with the parents/caregivers is essential, because the success of the therapy largely depends on them.

**Results:** the objective evaluation of oral motor function is difficult, since the methods available are mostly

based on visual and audible estimation. After 1 year of treatment a significative increase of the closed mouth and a decrease of the inactive tongue protrusion with an improvement of child's physiognomy were observed.

**Conclusion:** an early comprehensive multidisciplinary program is important to minimize the effects of the anomalies in children with Down syndrome. Castillo Morales method had a positive effect on oral motor function during the first year of therapy.

### Interceptive surgical and orthodontic management of 8 years syndromic patient

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**Aim:** Genetical disorders can frequently involve maxilla, mandible and teeth. These conditions include teeth's number, shape, eruption anomalies and maxillofacial growth anomalies. The presence of supernumerary teeth is associated with some genetic syndromes, for example cleidocranial displasia, familial adenomatous polyposis, trichorhinophalangeal syndrome type I, Rubinstein-Taybi syndrome, Nance-Horan syndrome, Opitz G/BBB syndrome, oculofaciocardiodental syndrome and Robinow syndrome etc. Prevalence of supernumerary teeth is reported between 0.2 to 3%, and is more frequent in males than females. In Cleft lip and palate the most common tooth alteration observed is tooth agenesis, 62% of all dental anomalies. We presents a syndromic cleft lip and palate patient with supernumerary teeth treated with surgical and interceptive orthodontic therapy, highlighting the systemic relationship between oral and systemic conditions.

**Methods:** A 8 year's old patient with congenital cleft lip and palate and a chromosome 7 deletion shows a eruptive disorder, in particular he has a eruption's stop of central right upper incisor 1.1. the right upper lateral incisor 1.2 is placed in 1.1 position, deciduous incisors are not present. In Orthopantomography we find supernumerary teeth localized at the 51 apex and a impacted 1.1. A cone beam tc is performed, it shows the presence of two supernumerary teeth. With general anesthesia we extract the supernumeraries, after 3 months we observe the vestibular eruption of 1.1 and we place a rapid palate expander, four roth brackets on 1.1 1.2 2.1 2.2 and a straight ni-ti wire 0.12. after 5 weeks we change the ni-ti 0.12 wire with a 0.16 ni-ti wire during this period we active the RPE once a week. after that we change the ni-ti steel with a stainless steel wire 0.16, and remove it and the RPE after 3 months. Than we follow up the teeth development and plan a second phase of treatment