

On the contrary, the association between MRONJ and Actinomyces presence is undoubtedly strong, although it is unclear whether MRONJ is caused by Actinomyces or the presence of Actinomyces species is a secondary infection. Our hypothesis is that bisphosphonates, antiresorptive drugs and antiangiogenic therapy (especially if steroids are simultaneously administered) render bones more susceptible for osteomyelitis, even if the pharmacology is different.

### Ozone therapy for the treatment of oral lichen planus: a case-control study

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**Aim:** Ozone therapy can be defined as a versatile bio-oxidative therapy with immunostimulant, analgesic and antimicrobial properties. The aim of this study was to assess ozone effectiveness in the treatment of erosive oral lichen planus.

**Methods:** A case-control study was carried out. Patients with erosive oral lichen planus visited at the Dental Clinic of Brescia from September 2016 to January 2017 were enrolled. Patients were randomly divided into two groups: group A received ozone therapy twice a week for two weeks; group B received cortisone topical therapy (betamethasone 4mg/ 2ml, two rinses a day for two weeks). For every patient, the area (cm<sup>2</sup>) of the largest erosive lesion was taken at T0 (first visit) and T1 (after two weeks). Pain assessment was evaluated using a Verbal Rating Scale (VRS) where 1=no pain, 2=mild pain, 3=moderate pain, 4=severe pain.

**Results:** A total of 20 patients were included in the study, divided into group A (n=10) and group B (n=10). The difference in the decline of the areas of the erosive lesions between the two groups resulted not statistically significant. A statistically significant difference in pain reduction was observed.

**Conclusions:** Ozone therapy is effective in reducing pain due to erosive Oral Lichen Planus.

### Conservative treatment of a Riga-Fede disease: a case report

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**Aim:** Riga-Fede disease (RFD) is clinically characterized by the presence of a traumatic ulceration on the ventral surface of the tongue in newborns and infants. It is frequently associated with prematurely erupting primary teeth, but may also occur after the eruption of primary lower incisors in older infants with repetitive tongue thrusting habits and in children with familiar dysautonomia (insensitivity to pain). In addition to trauma of the tongue, complications related to RFD are the increasing risk of infection of the wound, the discomfort during suckling and the inadequate intake of nutrients that can cause poor development of the patient. Usually, the treatment of RFD is the surgical extraction of teeth that could be associated with the excision of the lesion. Rarely, conservative therapy is adopted, by smoothing out sharp teeth surfaces or applying a thin layer of composite to the incisal edges of the teeth. The aim of this study is to describe a case of RFD in an infant, treated by our Sector.

**Methods:** An 8-month-old male baby was referred to our Sector for an ulceration of the tongue. The lesion was approximately 10mm diameter and was located at the midline of the ventral surface of the tongue. The teeth showed a physiological eruption, normal structure of the crown and absence of mobility. The clinical examination of the lesion showed a relationship with the mandibular anterior incisors, due to repetitive traumatic injuries of the tongue against the teeth. The palpation of ulcerated area elicited an acute pain response from the child. All these conditions also had interfered with proper suckling; furthermore, the parents reported the finger-sucking habit of their son. According to our collaborator Pediatric Dentist, this case was treated with a conservative approach, removing the traumatic agent and modifying sharp teeth surfaces. The parents, moreover, was informed that the finger sucking habit could delay healing, and should be limited.

**Results:** The patient returned after 1 month showing a good healing of the lesion. After 2 month, it was completely healed and infant was feeding normally.

**Conclusions:** In literature, there are several studies regarding RFD and the treatments proposed are different. The first option for RFD treatment is surgical extraction of the teeth; however, it must be considered that premature loss of primary teeth may result in aesthetic, orthodontic, and phonetic problems. Moreover, it can promote malocclusion's

complication and the child could develop a wrong tongue posture, which also jeopardize speech. It can also induce a gingival fibrosis in the area, which could interfere with the eruption of the permanent tooth. The conservative approach, instead, avoids these consequences, is less invasive and more tolerable by the little patient. By working together, the Oral Medicine specialist, the Pediatric Dentist and the parents can achieve positive results in a short period with minimal trauma to the infant. This disease makes it difficult for the infant to suck and feed, putting the baby at risk of nutritional deficiencies. It is important that professionals are able to recognize the RFD's injury and the causal agent, so that a proper diagnosis and treatment can be performed.

### Oral mucosal complications in orthodontic treatment

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**Aim:** Fixed orthodontic therapy is a valid method to solve functional and aesthetical oral problems, but the use of fixed oral devices can also cause negative effects in the oral cavity, if the treatment is not steadily under control. The aim of this study is to evaluate tooth, bone and soft tissues lesions due to fixed orthodontic appliances.

**Methods:** 100 patients with fixed orthodontic appliances were included in the study. In particular, 20 patients wear REP, 20 patients wear Forsus appliance, 20 patients had just the upper vestibular multibracket treatment, 20 patients had just the lower vestibular multibracket treatment while 20 patients had both upper and lower vestibular multibracket treatment. An accurate oral examination of the oral cavity, comprehending teeth, bone and soft tissues, was processed, in order to find possible lesions caused by the fixed orthodontic treatment.

**Results:** As regard REP, 35% patients had reversible palatal lesions, while 45% patients had the impression of the appliance on the tongue. Periodontal damages were observed in 5% patients, while tooth lesions such as dental caries were found in 5% patients. 20% of the patients with Forsus appliance experienced the lesion on the cheek mucosa, while 10% individuals reported periodontal problems, and 15% of the subject suffered for WSL (white spot lesion) and dental caries. Upper vestibular multibracket appliance

complained for superior labial lesions (15%), cheek mucosal lesions (20%), gingivitis (55%), WSL of superior teeth (15%), while dental recessions and periodontitis due to the appliance were rarely observed (5%). Lower vestibular multibracket appliance was frequently the cause of inferior labial lesions (15%), cheek mucosal lesions (15%), gingivitis (50%), WSL of inferior teeth (20%), and also in lower arch dental recessions and periodontitis due to the appliance were rarely observed (5%). Patients with both superior and inferior multibracket appliance experienced upper and /or lower lip lesions (25%), lesions of cheek mucosa (25%), gingivitis (65%) and WSL (30%), and just in few cases periodontitis (10%). Data shows a more critical oral situation in patients with both superior and inferior appliances than people with one-arch therapy, especially concerning inflammations such as gingivitis and other problems related to oral hygiene. Intra-oral photographs were taken to record the characteristic of the oral lesions caused by these oral devices.

**Conclusion:** An accurate assessment of the patients before the application of fixed orthodontic treatment is necessary. Oral hygiene instructions and motivation are very important, as well as periodic controls of the fixed oral device. The orthodontists are medical professional, and not only a mechanic, so their examination doesn't interest exclusively tooth movements, but comprehends the evaluation of the whole oral cavity, thus teeth, periodontal structures, bone and soft tissues have to be always observed.

### Bio-impedance analysis of mucosal tissues of the oral cavity: a comparison between healthy patients and patients affected by oral lichen planus

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**Aim:** Lichen Planus is a chronic inflammatory autoimmune disease that may affect the skin, the mucous membranes of the oral cavity and also other mucosae. According to the Literature, Oral Lichen Planus (OLP) has a higher incidence rate in the fourth decade of life and the female-to-male ratio is 1.4:1. The prevalence is estimated to be around 1-2% among population worldwide and oral manifestations may appear under various aspects, namely reticular, plaque-like, erosive, atrophic or bullous. The buccal mucosa, the tongue and the gingivae are the most commonly involved, but other