SECONDARIES PROBLEMS OF ORAL MUCOSA DURING ORTHODONTIC TREATMENT.

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ABSTRACT

Introduction
In the recent years, there was an increase in the number of people, adults and children, who undergo orthodontic therapy, probably since the modern innovations that have characterized the field of orthodontics, which allow us to offer orthodontic devices acceptable from an aesthetic and functional point of view.

Objectives
In this work, we want to focus on the possible consequences that may occur in the soft tissues during orthodontic treatment, which often are a source of alarm among patients and parents. In addition, it wants to raise awareness about this the orthodontists colleagues to reckon with problematics that may occur during the course of treatment.
The orthodontic movements are the result of forces that are applied to the teeth and that are produced by equipment such as brackets, wires, strings, elastic bands and springs.
Patients undergoing orthodontic treatment have increased risk of oral problems such as plaque formation, white lesions, gingivitis, oral mucosal lesions (traumatic ulcers, aphthous, hyperkeratosis).

Discussions
The data obtained from the literature and clinical experience, the most common problems to the oral mucosa that can be encountered in the course of orthodontic treatment include: traumatic injuries of various kinds, pseudocysts lesions of the salivary glands (mucocèle, ranula), gingival hypertrophy, allergic reactions to materials, frictional hyperkeratosis.

Conclusions
Orthodontic treatment involves a higher risk of oral mucosal lesions and implies a greater awareness of better oral hygiene. Oral hygiene instruction and early treatment of oral lesions are important considerations for better motivation of the patient, treatment planning and the successful outcome. It is important that the doctor follow in a continuous manner the state of health of the teeth and its associated structures, in order to ensure an optimal result for the same treatment, without incurring any unpleasant complications.

Key words: secondaries problems, oral mucosa, orthodontic devices
RIASSUNTO

Introduzione
Negli ultimi anni, si è riscontrato un notevole aumento del numero di persone, adulti e bambini, che ricorrono alle terapie ortodontiche; questo fenomeno, probabilmente può essere stato influenzato dalle moderne innovazioni che hanno caratterizzato il campo dell’ortodonzia, che permettono di proporre al paziente presidi ortodontici sempre più accettabili da un punto di vista estetico e funzionale.

Obiettivi
Con questo lavoro, si vuole porre l’attenzione circa le possibili conseguenze che si possono verificare a carico dei tessuti molli orali a seguito di terapia ortodontica, che spesso sono fonte di allarmismo tra i pazienti e i genitori.
Inoltre, si vuole sensibilizzare su questo argomento i colleghi ortodontisti a non sottovalutare le problematiche che si possono riscontrare durante il corso del trattamento.

I movimenti ortodontici sono il risultato di forze che si applicano ai denti e che sono prodotte da apparecchiature quali: brackets, fili, archi, elastici, molle e via dicendo.
I pazienti sottoposti a trattamenti ortodontici sono esposti ad un maggior rischio di problemi orali come: formazione della placca, lesioni bianche, gengiviti, lesioni della mucosa orale di vario genere (ulcere traumatiche, afte, ipercheratosi).

Discussioni
Dai dati ricavati dalla letteratura e dall’esperienza clinica, le problematiche più comuni alle mucose orali che possono essere riscontrate in corso di cure ortodontiche comprendono: lesioni traumatiche di varia natura, lesioni pseudocistiche delle ghiandole salivari (mucocele e ranula), aumento di volume gengivale con formazione di pseudotasche, reazioni allergiche ai materiali utilizzati, ipercheratosi frizionali.

Conclusioni
Il trattamento ortodontico comporta un rischio più elevato di lesioni della mucosa orale e implica una maggiore consapevolezza dell’importanza di una buona igiene orale. Istruzioni di igiene orale ed il trattamento precoce delle lesioni orali sono considerazioni importanti per una maggior motivazione del paziente, la pianificazione del trattamento e il risultato di successo. È importante che il medico monitorizzi in modo continuativo lo stato di salute dei denti e delle strutture annesse, al fine di garantire un risultato ottimale per il trattamento stesso, senza incorrere in spiacevoli complicanze.

Parole chiave: problematiche secondarie, mucosa orale, apparecchiature ortodontiche

INTRODUCTION
In the recent years, there was an increase in the number of people, adults and children, who undergo orthodontic therapy, probably since the modern innovations that have characterized the field of orthodontics, which allow us to offer orthodontic devices acceptable from an aesthetic and functional point of view. It is known that the orthodontic treatment, fixed or removable appliance, it can cause injury to the soft and hard tissues of the oral cavity; so the oral mucosal lesions that develop in correlation with the orthodontic treatment are often a source of alarm among patients and parents (1, 2). The orthodontic movements are the result of forces applied to the teeth or to skeletal system which are produced by appliance such as brackets, wires, strings, rubber bands, springs, hooks and so on (3). Such appliance, for their morphology, it can determine the alterations of soft tissue. In the literature, studies on the frequency of oral diseases in children and adolescents reportes the changes of the oral mucosa most commonly encountered in traumatic injuries.

OBJECTIVES
Patients undergoing orthodontic treatment are at an increased risk of oral problems such as:
- Formation of plaque: about 2-3 times higher than the levels observed in patients not in treatment (4) (Figure 1), in
fact, the lack of a proper and thorough oral hygiene in patients wearing orthodontic devices, facilitates the proliferation of bacterial and then the deposition of abnormal amounts of plaque.

- White lesions of Teeth: One third of patients found areas of demineralization that the initial phase of caries at the end of treatment (5);
- Gingivitis: the storage of a large amount of plaque and thus a greater proliferation of bacteria, cause inflammation and gum bleeding (6);
- Lesions of the oral mucosa: more than three quarters of people with orthodontic appliances present oral ulcerations (7), aphthous lesions, frictional hyperkeratosis, injury to the mold (Figure 2).

Among the various causal factors of traumatic injuries play a significant role your orthodontic appliances (8, 9), in fact, orthodontic appliances, fixed or removable, have metal components, such as springs, hooks and brackets, which can be traumatizing. Other components, such as metal ligatures and arches, have sharp edges that can be directly harmful. The constant rubbing with these structures during acts of speech or chewing, can cause ulcerative lesions, aphthous lesions, hyperkeratosis lesions, in addition, contact with these metal structures can cause allergic reactions to materials (10).

Ulcerative lesions (Figure 3) may be defined as: loss of substance that affects both the epithelium that the dermis and has a low tendency to healing; among the etiologic factors involved are continuous traumatic stimuli, use of drugs, exposure to substances caustic or sources of heat, fungal infections, microbes, toxic agents, neoplastic deficiency. The ulcerative lesions, clinical-looking differ depending on the cause to which they associate with. The lesions are aphthous ulcerations immunologically based, circular or oval, located mainly on non-keratinized mucosa.

Hyperkeratosis and Hyperplasic lesions (Figure 4) have the characteristic to regress to the cessation of the stimulus, among these are the keratosis or hyperkeratosis by friction or frictional, which constitutes the physiological response of the epithelium to the action chronic rubbing.
DISCUSSION
The presence of traumatic lesions may be accompanied by pain, burning, discomfort and then worry about the patient. This condition may persist for the entire duration of the treatment, until the removal of the stimulus irritative.

In the event that we are faced with more complex lesions, as mentioned before, is essential on the part of dentist, timely intervention in the recognition of these injuries and their treatment.

The use of orthodontic wax, by the patient, to be applied on the parts wounding of the equipment helps to prevent trauma and thus reduces discomfort. Often the insertion of orthodontic devices, particularly mobile, it can, especially in the early stages of treatment, favoring the onset of bad habits like biting the cheeks or lips, in turn, causes of repeated trauma to the oral mucosa.

Orthodontic treatment involves a higher risk of oral mucosal lesions and implies a greater awareness of better oral hygiene. Oral hygiene instruction and early treatment of oral lesions are important considerations for better motivation of the patient, treatment planning and the successful outcome. It is important that the doctor follow in a continuous manner the state of health of the teeth and its associated structures, in order to ensure an optimal result for the same treatment, without incurring any unpleasant complications.

CONCLUSIONS
Orthodontic treatment involves a higher risk of oral mucosal lesions and implies a greater awareness of better oral hygiene. Oral hygiene instruction and early treatment of oral lesions are important considerations for better patient’s motivation, treatment planning and the successful outcome (11). Although clinical cases of "pseudo" increase in gingival volume localized or generalized based on inflammatory edema are common and it is therefore important to monitor repeatedly and maintain excellent levels of oral hygiene. Finally, allergic reactions in resins or metals, although rare in the oral cavity must be taken into consideration especially in patients with known hypersensitivity to nickel.

It is important that your doctor knows and knows how to intercept the possible complications of orthodontic treatment of oral mucosal, so that it may prevent the onset and be able to reassure the patient in case of occurrence of the same and for this purpose, it is therefore essential to monitor continuously the state of health of the teeth and associated structures in order to achieve the best outcome for the treatment itself, without any unpleasant complications, wherever necessary, it would be appropriate to send the patient to a specialist in oral pathologist.

BIBLIOGRAFIA


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