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INTERNAL BLEACHING AFFECTS SHEAR BOND STRENGTH OF CERAMIC BRACKETS

Dental whitening is a procedure that is becoming increasingly common in dental offices, since the demand for cosmetic procedures is very great. The search for white teeth is a constant in contemporary society. This tendency also has repercussions in Orthodontics, in which more and more patients refuse to use metallic orthodontic appliances. In this context, a question arises: would shear bond strength of ceramic brackets be impaired by dental bleaching? This clinical question has already been exhaustively answered. Still, another one lingers on: and internal bleaching, would it be able to cause bonding failure of ceramic brackets to the enamel? In the search for answers to this and other questions, Indian researchers developed a study[1] in that not only evaluated the influence of internal bleaching on bond strength, but also different internal bleaching agents. From the study, the authors concluded that intracoronal bleaching significantly affects the shear bond strength of ceramic brackets even four weeks after bleaching. They further concluded that bleaching with sodium perborate affects shear bond strength more adversely than bleaching with other agents, such as hydrogen peroxide and carbamide peroxide.

STABILITY OF DENTAL, ALVEOLAR AND SKELETAL CHANGES WITH MARPE

The advent of skeletal anchorage represented a milestone in present-day orthodontics. Problems once difficult to solve have become predictable. When launched, skeletal anchoring devices were used for anchorage during post-extraction retraction, tooth distalization, and vertical control. Nowadays, a new perspective emerges, with the use of mini-implants coupled to expanders, with the purpose of expanding the arch with the least possible dental effect. Miniscrew-assisted rapid palatal expander (MARPE) has gained notoriety and adepts around the world, but doubts remain about their effects and the post-expansion stability. In order to elucidate the pending issues regarding the effects of MARPE, Korean researchers have developed a clinical study[2] to assess the dental, alveolar and skeletal stability after expansion using MARPE. The authors concluded that MARPE can be used as an effective tool to correct maxillomandibular transverse discrepancy, showing stable results one year after expansion.

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Submitted: August 10, 2017 - **Revised and accepted**: August 22, 2017

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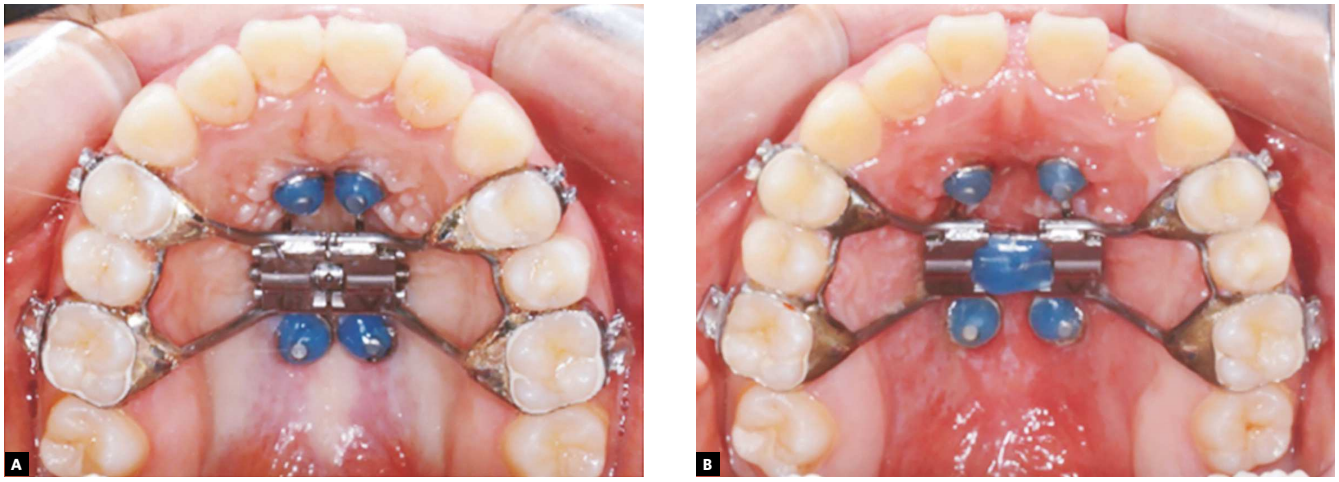

Figure 1 - Miniscrew-assisted rapid palatal expander (MARPE): **A**) before expansion; **B**) after expansion.

ALIGNERS ARE MORE COMFORTABLE THAN FIXED ORTHODONTIC APPLIANCES

One of the frequent complaints of patients when performing an orthodontic treatment is discomfort with orthodontic accessories. Brackets, tubes, buttons and elastics represent a torture for the most sensitive patients. Enthusiasts regarding the use of aligners defend the thesis that they are more comfortable, in addition to having superior aesthetics compared to conventional orthodontic appliances. However, it is always necessary to practice evidence-based orthodontics, not just based on the personal opinions of professionals. In search of evidence, American and Brazilian researchers developed a clinical study[3] to obtain from patients using conventional appliances and aligners the report of the initial discomfort, and after 1 and 2 months using them. With this study, the authors concluded that traditional fixed appliances produce significantly more discomfort than aligners. The authors further point out that patients treated with traditional aligners and appliances reported less discomfort in subsequent appointments after the installation of the orthodontic appliances.

LINGUAL RETAINERS DOES NOT POSE A RISK FOR DEVELOPMENT OF GINGIVAL RECESSION

Orthodontic treatment relapse is a harsh reality we have to deal with. Now we know that lower anterior teeth have to be contained lifelong. Dental crowding subsequent to orthodontic treatment is nowadays considered as dental "wrinkles", since evidences show that it is unlikely to exist stability over the years in the absence of a lingual retainer. However, some professionals criminalize these lingual retainers, blaming them for gingival recessions. Despite the personal opinions of these professionals, there were no evidences in literature to prove such suspicion. Recently, a study was published in which the relationship between the presence of a lingual retainer and the onset of gingival recession was evaluated. The results of this study revealed that long-term presence of fixed lingual retainers does not seem to increase the development of mandibular gingival recession. The authors also draw attention to the fact that the presence of retainers increases the accumulation of calculus in the region.

SELF-ETCHING AGENTS AND RESIN-REINFORCED GLASS IONOMER CEMENTS DO NOT ALTER THE ENAMEL COLOR AFTER REMOVAL OF ORTHODONTIC ACCESSORIES

At the end of orthodontic treatment we must deliver to our patient his treated malocclusion and maintenance of the integrity of soft and hard tissues. This may seem simple, however, many variables are involved in orthodontic treatment period, which often are beyond our control, since they depend on patients collaboration. Although we already know this, we have to do our part encouraging them throughout the treatment as to the correct maintenance of the integrity of the oral structures. In addition, we have to use materials that do not alter our most precious goods, the teeth. When bonding orthodontic accessories, we use bonding agents presented as adhesives, self-etching primers, resin-reinforced glass ionomer cements and composites that, if do not have color stability, may compromise aesthetics achieved with orthodontic treatment. Color stability has gained prominence given the constant complaints from the patients on how their teeth had changed color after using the appliance. Thus, in order to evaluate the color stability of different materials for orthodontic bonding, Indian researchers developed a systematic review[5] in which they concluded that self-etching agents and resin-reinforced glass ionomer cements produce less changes in enamel color compared to conventional conditioning and the other photo- and chemically activated bonding agents, respectively. At the end of the article, the authors also emphasize the need for post-removal polishing of the composites, in order to reduce enamel color change.

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