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RAPID MAXILLARY EXPANSION ALTERS VOICE QUALITY

Rapid maxillary expansion is without a doubt the most commonly used facial orthopedic procedure in the world. The benefits derived from this therapy are diverse, ranging from aesthetic improvements to functional and respiratory ones. When thinking about respiratory changes, we ought to also reflect about voice alterations. It is known that voice formation is a complex physiological process involving the interaction among respiration, the larynx and resonance systems. With this in mind, Turkish researchers developed a study[1] that assessed whether facial changes promoted by rapid maxillary expansion would alter voice quality (Fig 1). A clinical study was performed with 30 patients who had unilateral or bilateral crossbite. Their voice samples were recorded and analyzed by a software before and after undergoing rapid maxillary expansion. The results obtained with this study revealed that there were changes in the voice parameters which were correlated to the increase in the nasal cavity.

PARACETAMOL, CHOSEN ANALGESIC FOR THE RELIEF OF POST-ORTHODONTIC TREATMENT PAIN

After an orthodontic treatment, a frequent complaint of our patient is the discomfort felt in the early post-maintenance days. The role of inflammation in the process of induced orthodontic movement is well established and described in the orthodontic literature. Although it is a controlled inflammation, some patients suffer a lot, often resorting to drugs for pain relief. In view of this situation, which drug should be prescribed? In search of an answer to this clinical question, Brazilian researchers have developed a systematic review[2] with the proposal of clarifying which analgesic could be used without interfering with tooth movement. The results of this review revealed that paracetamol can be considered as the drug of choice for pain relief, since evidence has shown that it interferes little with tooth movement.

MALOCCLUSION WITH DIASTEMA, CROWDING AND OVERJET DECREASES SELF-ESTEEM IN ADOLESCENTS

The gains obtained from the treatment of malocclusion go far beyond a correct dental positioning. Nowadays, it has been found that after correction of malocclusions individuals are better perceived by the society in which they live. There is thus no doubt that the presence of malocclusion affects the social relations of individuals. In this context, a question arises: how does the individual feel in the presence of malocclusion? Could malocclusion treatment affect one's self-esteem? In seeking to answer these important questions, Saudi researchers developed a study that evaluated the self-esteem among adolescents aged 12 to 19 years old.[3] Their results showed that malocclusion has a negative effect on self-esteem. The findings also showed that malocclusions which present diastema, crowding and overjet have an even greater impact on self-esteem. These conclusions further emphasize the importance of Orthodontics in the life and well-being of the individual.

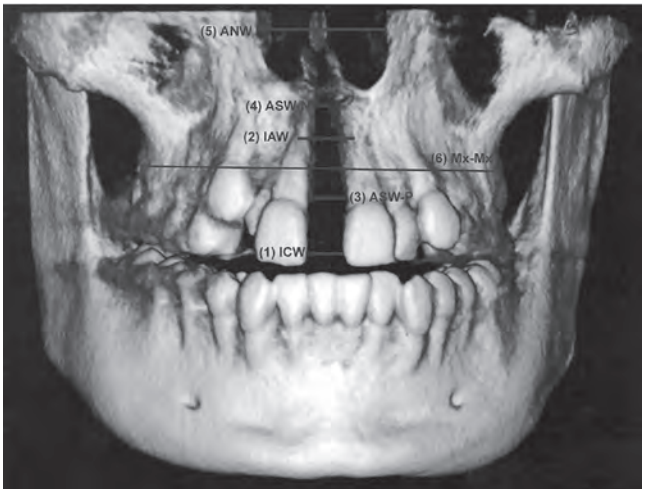

Figure 1 - Measurements taken on computed tomography after the rapid maxillary expansion procedure. Source: Bilgiç et al.[1], 2017.

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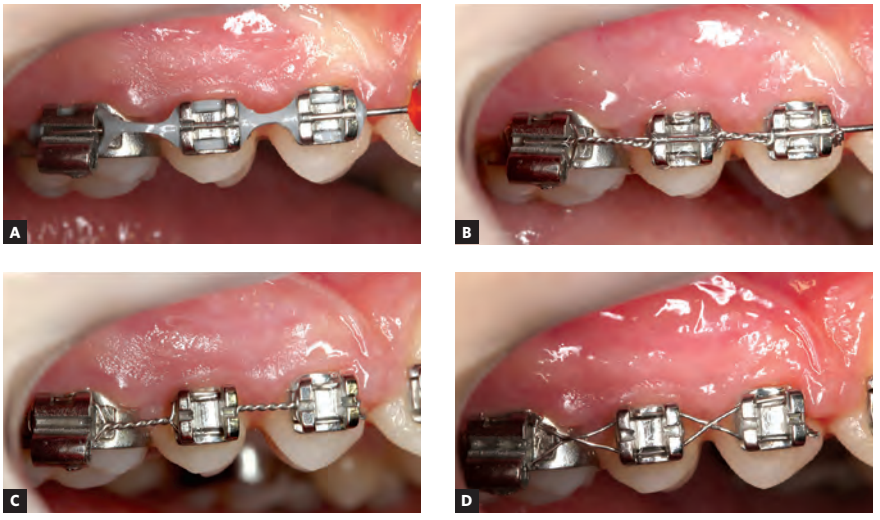

Figure 2 - Clinical photographs of the evaluated devices. **A**) elastomeric ligature in elastic chain; **B**) stainless steel ligature crossing over the archwire; **C**) steel ligature crossing under the archwire and **D**) steel ligature crossing in a figure-eight pattern under the archwire. Source: Shirozaki et al.[4], 2017.

STREPTOCOCCUS MUTANS IS PREVALENT IN ANY TYPE OF ORTHODONTIC LIGATURE

The presence of the orthodontic appliance provides a favorable environment for the accumulation of bacterial biofilms. Measures should be taken in order to reduce this accumulation, since the surface of the enamel has to remain undamaged at the end of the orthodontic treatment as it was in its beginning. Much has been said, during the history of Orthodontics, about measures that could minimize bacterial accumulation in orthodontic accessories. These measures include the use of metal alloys and self-ligating brackets, among others. However, until now little evidence is available in the literature regarding which is the best way to tie the teeth during treatment, from a microbiological point of view. With the prospect of elucidating this issue, Brazilian researchers developed an *in vivo* study[4] where they evaluated four different ways of tying teeth, as can be seen in Figure 2. The quantification of *Streptococcus mutans* was then assessed, since this microorganism is directly related to the etiology of caries. The results obtained with this study concluded that scanning electron microscopy results showed that the contamination levels of *S. mutans* are similar in different orthodontic ligatures.

ORTHOGNATHIC SURGERY WITHOUT PREVIOUS ORTHODONTIC DECOMPENSATION IS AS STABLE AS THE TRADITIONAL PROTOCOL

Pre-surgical orthodontic treatment has been known as a prerequisite in the traditional surgical-orthognathic approach. The pre-surgical orthodontic phase aims to decompensate the teeth, leaving them in the best relation with their osseous bases. However, in certain clinical situations the esthetic situation of the patient is so severely compromised that one can resort to a previous surgery in order to improve their facial harmony and consequently their self-esteem. The technique of anticipated benefit has gained supporters every day driven by the desire of today's society for aesthetics. Based on the above assumptions, Korean researchers developed a clinical study[5] in 104 patients with Class III malocclusion in which they assessed the orthodontic treatment's stability with and without previous orthodontic treatment. The authors conclude from this study that the surgical approach without pre-surgical orthodontic treatment can obtain similar results of long-term anteroposterior stability in the correction of dentofacial deformities, when compared to cases in which previous orthodontic treatment was performed.

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