

Matheus Melo Python\*

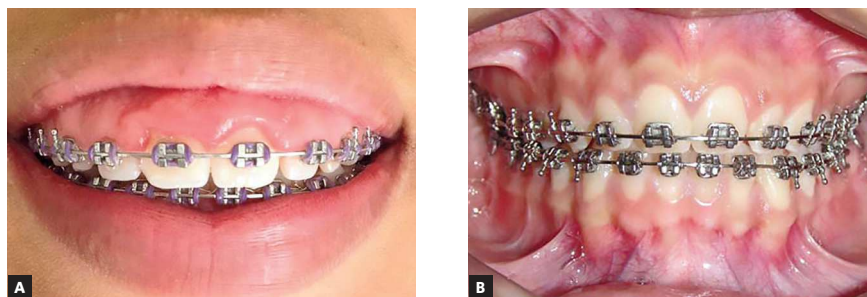
### PERIODONTAL CONDITION AND BLOOD PARAMETERS ARE THE SAME AMONG NICKEL ALLERGIC AND NONALLERGIC PATIENTS AFTER REMOVAL OF ORTHODONTIC APPLIANCE

It is not uncommon to encounter gingival edema and relevant bleeding in patients with a satisfactory oral hygiene. In these situations, our behavior consists in asking the patients to intensify their hygiene, however, despite redoubled care, the periodontal situation remains the same. In these situations, it is always important to investigate if we are not facing a case of a nickel allergic patient. If the allergy diagnosis is confirmed, measures can be taken in order to minimize this problem, as the substitution of metal brackets by nonmetallic ones or, even, invisible aligners. However, once installed the allergic process with periodontal and blood parameters changes, is there regression after removal of fixed orthodontic appliances? In search of answers to this and other questions, Brazilian researchers developed a clinical study<sup>1</sup> in which two groups were assessed, one consisting of patients with confirmed allergy to nickel and another with nonallergic ones, both using fixed orthodontic appliances (Fig 1). The authors conclude with this

study that, one month after removal of the devices, periodontal and blood parameters of nickel allergic patients were similar to the nonallergic ones.

### TOOTHPASTE CONTAINING BRAZILIAN PROPOLIS IS EFFECTIVE IN THE CONTROL OF DENTAL PLAQUE AND THE IMPROVEMENT OF GINGIVAL HEALTH IN CLEFT PATIENTS

Control of dental biofilm is an arduous task among patients using fixed and/or removable orthodontic appliances. The presence of orthodontic appliances increases bacterial accumulation, hindering its elimination. With anatomical alterations, as in cleft patients, this task is shown to be even more complicated. There are several accessories and/or products available on the market in order to make teeth cleaning more efficient when using orthodontic appliances. Nonetheless, chemical efficiency is also still necessary, in combination with some of their common mechanical characteristics. In this perspective, associations arise that can be inserted to mouthwash solutions and/or toothpastes, such as, for example, Brazilian propolis. Propolis has been used due to its proven anti-inflammatory, antifungal, antibacterial, cicatrizing



**Figure 1** - Periodontal condition; **A)** nickel allergic patient; **B)** nonallergic patient.  
Source: Pazzini et al,<sup>1</sup> 2016.

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and anesthetic actions, although no study has been dedicated to evaluate it incorporated into toothpastes to be used in cleft patients using orthodontic appliances. With the purpose of evaluating the effectiveness of this association, Polish researchers developed a clinical study,<sup>2</sup> which results revealed a significant drop in the dental plaque index and the gingival index after the use of toothpaste containing propolis in its formulation. These results were similar in patients using fixed or removable devices. The results of this study are revealing and encouraging, mainly because Brazilian propolis has proven to be effective.

### INVISIBLE ALIGNER SHOWS COLOR CHANGE AFTER IMMERSION IN COFFEE

The search for invisibility of orthodontic appliances made dental aligners reemerge. At present, it is the main theme in the most important congresses of the area. The promise of invisibility is an attraction for the society eager for esthetics. Following this trend, aligners have become popular, with many brands being released on the market each year. But one question is relevant: is the promised invisibility maintained throughout the period of use? Do food pigments not taint these aligners? In the search for the response to these questions, Chinese researchers developed a study<sup>3</sup> in which they evaluated the color stability of three different dental aligners (Invisalign, Angelalign and Smartee) when submerged in foods with proven staining ability (coffee, red wine and black tea). The authors found with this study that the three types of esthetic orthodontic appliances exhibited color stability after a 12h immersion, except for the Invisalign aligners, which were stained by coffee (Fig 2). Invisalign aligners are more likely to undergo pigmentation than Angelalign and Smartee. The results of this study are of clinical relevance since what most takes the patient to opt for this type of treatment is its esthetics.

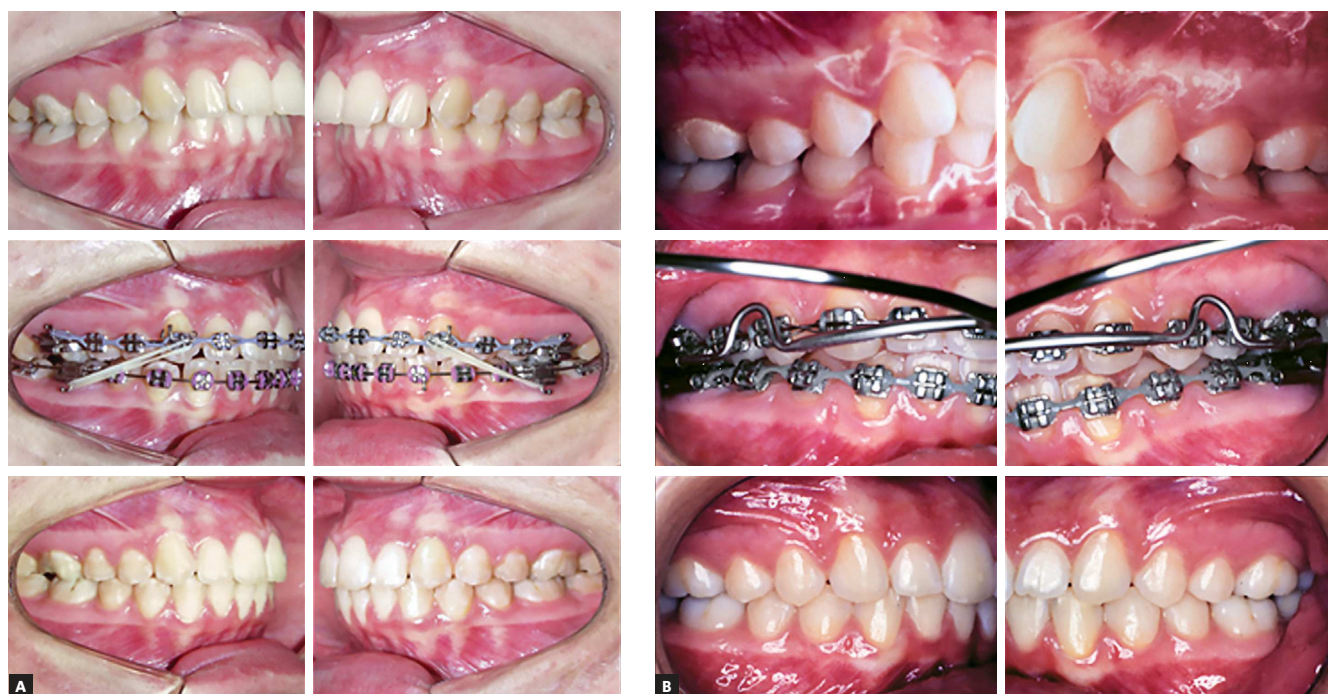
### 5% BENZOCAINE GEL REDUCES PAINFUL PERCEPTION AFTER ORTHODONTIC ACTIVATION

The pain resulting from orthodontic activation is a common complaint among orthodontic patients. To process orthodontic movement, it is necessary to release prostaglandin which is known as a pain mediator. Thus, pain and orthodontic movement go



**Figure 2** - Photograph of tested aligners. **A)** Invisalign; **B)** Angelalign; **C)** Smartee. Aligners before immersion (a0, b0, and c0) and after immersion in coffee (a1, b1, and c1), black tea (a2, b2 and c2), red wine (a3, b3, and c3), and distilled water (a4, b4, and c4) for 12h and 7d. Source: Liu et al,<sup>3</sup> 2016.

together to our discontent. But, what could we do to minimize this pain? The use of anti-inflammatory drugs has been suggested, however, their systemic action may interfere with the movement's rate, hindering the treatment. In the search for something that would reduce discomfort and, at the same time, not interfere in the bone remodeling process, arises the idea of locally using a 5% benzocaine anesthetic gel. But, would its use be effective? Seeking answer to this question, Iranian researchers have developed a randomized controlled trial.<sup>4</sup> The results from this clinical study showed that the use of 5% benzocaine gel reduces pain perception in 4 hours compared to placebo gel. The pain peak was 2 hours for the placebo gel and 6 hours for the 5% benzocaine gel.



**Figure 3** - A) Initial, intermediate, and final intraoral photographs of a Class II malocclusion treated with intermaxillary elastics; B) Initial, intermediate, and final intraoral photographs of Class II malocclusion treated with extraoral device. Source: Janson et al,<sup>5</sup> 2016.

### USE OF CLASS II ELASTICS DOES NOT INCREASE THE RESORPTION LEVEL IN CLASS II MALOCCLUSION TREATMENT WITHOUT EXTRACTION

The numerous benefits derived from the correction of malocclusion are well known by all of us. These benefits deal with esthetic, functional and, even, social improvements. Nevertheless, we cannot forget that despite so many positives aspects, the orthodontic treatment can cause root resorption. Root resorption is still a puzzle for us orthodontists. There are several hypotheses about the orthodontic modality that would provide better or lesser resorption. Among these modalities, the use of Class II elastics for the treatment of Class II malocclusion without extraction. But would the use of elastics really be able to enhance this process? Seeking to answer this clinical question, Brazilian researchers developed a clinical study<sup>5</sup> in which they evaluated root resorption in two groups of patients with Class II malocclusion treated with elastics or extraoral appliance (Fig 3). The results obtained from this study revealed that the correction of Class II malocclusion with use of

Class II elastics does not increase the resorption risk compared to treatment with use of extraoral appliance. These results rule the formulated hypothesis out, giving greater evidences to using this therapy in the correction of Class II malocclusion.

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