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ASYMMETRIES NOT GREATER THAN 5.6 MM GO UNNOTICED BY LAYPEOPLE

The literature extensively reports the need for a certain degree of asymmetry between the right and left sides of the face, which give facial contour a natural form. Should both sides of the face be completely symmetrical, they give the person an artificial and unpleasant look. Nevertheless, what is the acceptable limit of normal asymmetry? With a view to answering this question, English researchers conducted a study¹ in which they analyze frontal facial photographs of female and male patients (Fig 1) and develop different degrees of asymmetry in the chin area. The same images were analyzed by laypeople, students and professionals of Dentistry, as well as dental-surgeons and orthodontists in terms of perception of different degrees of facial asymmetry in male and female patients. Results revealed that the two major factors influencing perception of asymmetry were the evaluator and the degree of asymmetry. Orthodontists proved much more critical of asymmetry in comparison to laypeople. The more asymmetric was an image, the more noticeable asymmetry was. The research outcomes prove necessary to assess each case individually before referring a patient to surgery.

DENTAL ALIGNMENT IS MORE QUICKLY PER-FORMED WITH CONVENTIONAL BRACKETS RATHER THAN WITH SELF-LIGATING ONES

Since the beginning of our specialty, we have experienced an evolution in terms of technique, material and concepts adopted. As in any other knowledge domain, evolution tends to promote improvements in

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products and services, thereby making our lives easier. Orthodontic brackets are not different. They stand in the spotlight due to their ligating system, in other words, they have become self-ligating. Undoubtedly, the self-ligating system is beneficial, especially in terms of chair time, as it eliminates the need for using



Figure 1 - Men with different levels of asymmetry (from the left upper side: 0 mm, 6 mm, 8 mm, 10 mm, 12 mm, 14 mm, 16 mm, 18 mm and 20 mm). Source: McAvinchey et al.¹, 2014.

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rubber bands and consequently reduces chair time and optimizes appointments. Importantly, other benefits have also been attributed to these devices; however, reduced treatment time remains as the focus of attention. Nevertheless, is this system really capable of reducing treatment time? With a view to answering this question, English researchers conducted a random controlled clinical trial² to compare the time spent for initial alignment and post-extraction space closure with conventional and self-ligating passive and active brackets. Their results reveal that the time spent for initial alignment was statistically less in the group with conventional brackets without differences between passive and active brackets. Regarding the time spent for post-extraction space closure, there were no differences between self-ligating active and passive brackets. These results are important and need to be widely divulged so as to avoid orthodontists to believe that treatment time might be reduced by changing the type of bracket, only.

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VIRTUAL SETUP IN DIGITAL MODELS: A RELIABLE TOOL

The dream of foreseeing the future is shared by the overall population. Those who have the gift of doing so are seen as successful. In Orthodontics, the simplest and most trivial way of foreseeing the future of treatment is by manufacturing an orthodontic setup. Nevertheless, manufacturing a setup in dental casts is tiring and requires an eye for details so as to yield good final outcomes. An orthodontist hardly ever manufactures a setup for each one of his cases. However, digitization of orthodontic records, especially orthodontic casts, brings a new perspective to the concept of orthodontic setup. This new possibility does not require as much work and does not create as much mess as the conventional technique, given that it is produced based on images of virtual models. Nevertheless, some doubts are cast over virtual setups: Are they as reliable as conventional setups? With a view to answering this question, Korean researchers conducted a study³ to compare the results achieved by dental casts setups and virtual setups in digital models (Fig 2). Their results revealed that digital and conventional setups yield similar measurements for intra and inter-arch variables.

TOOTH PASTE WITH HIGH FLUORINE CONTENT REDUCES WHITE SPOTS IN ORTHODONTIC PATIENTS

White spot lesions underlying orthodontic appliances is a common complication found in orthodontic practice. The difficulty in performing proper hygiene is always justified by the presence of orthodontic appliances. Developing products that minimize such problems is a desire shared by the orthodontic community. Fluorine of various types and concentrations has been used by many years with this purpose. Tooth pastes with high fluorine content are available on the market and recommended for patients with difficulty in keeping proper oral hygiene. However, in this context, the following question arouses: Is this type of tooth paste really capable of minimizing white spots in orthodontic patients? With a view to confirming



Figure 2 - 3D digital model and virtual setup procedures: A) 3D digital model; B) segmentation and normalization; C) checking tooth movement and changes in angulation and teeth proclination; D) virtual setup; E) assessing arch coordination and F) checking occlusal contact. (Source: Im et al.³, 2014).

such hypothesis, Swedish and Danish researchers conducted a random controlled clinical trial⁴ to assess the effectiveness of high fluorine content tooth pastes on orthodontic patients. Their results revealed that daily using high fluorine content tooth paste significantly reduces the prevalence and incidence of white spot lesions underlying fixed orthodontic appliances. The authors also highlight that this type of tooth paste must be considered as an alternative for patients with high risks of tooth cavity.

POSTERIOR CROSSBITE AFFECTS PATIENTS' QUALITY OF LIFE

Much attention has been given to the effects of oral problems, especially orthodontic issues, on patients' general health and well-being. Several oral problems might be associated with changes in patients' quality of life. An orthodontic problem shared by the overall population is posterior crossbite which might have a long-term effect on growth and development of teeth and maxillary bones, in addition to affecting mandibular movement and hindering temporomandibular joint dynamics. The aforementioned issue casts doubt on the following: Does crossbite affect orthodontic patients' quality of life? With a view to answering this question, Malay and English researchers conducted a study⁵ to assess the quality of life of 145 subjects of which 72 had posterior crossbite and 73 were in normal occlusion. Patients were aged between 15 and 25 years old. After applying quality of life questionnaires, the researchers came to the conclusion that posterior crossbite significantly affects patients' quality of life, thereby reinforcing the need for preventive and interceptive measures at an early age.

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