



DIGITAL SMILE DESIGN AS PRINCIPAL OPTIMIZER OF DENTAL AESTHETICS: TWO CASE REPORTS

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ABSTRACT

Introduction: In the world, it has grown increasingly researched for dental professionals, 20.0% of dentists located in Brazil. According to the Federal Council of Dentistry, the specialties most searches today, were 70.0% in the rehabilitation of the smile and aesthetic.

Objective: The objective of this study was to focus the applicability of dental smile designs in the planning of two aesthetic cases and how this software facilitates the execution of these treatments with Digital Smile Design (DSD).

Case 1: Patient S had a need for gingival remodeling. The guidelines for waxing were: - waxing from 14 to 24; - teeth 14 and 24 minimum volume in the vestibular possible; - teeth 13 and 23 volume in the vestibular to correct palatinization; - teeth 12, 11, 21 and 22 little volume in the vestibular and small incisal increase according to drawing; - teeth 11 and 21 will not need to wax on the gingiva because it has already been made gingival plastic.

Case 2: Patient I, Dental proportion of 80.0 %.

Conclusion: The two clinical cases of the present study with the DSD enabled the professional to better understand patients, their particularities, desires and needs.

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INTRODUCTION

In the world, it has grown increasingly researched for dental professionals, 20.0% of dentists located in Brazil. According to the Federal Council of Dentistry, the specialties most searches today, were 70.0% in the rehabilitation of the smile and aesthetic (Assaf, 2014). The analysis of the peculiarities of each patient should be observed and give the idea of the attitudes to be taken relating the patient's expectation and the possibilities of the restorative arsenal of the current dentistry are clinical or surgical, adequate according to anatomical aspects of the patient and possible application of obvious proportions in the aesthetic result (Baratieri et al., 2002). The Digital Smile Designs (DSD) search currently brings to dentistry the personalization and satisfaction of the aesthetic desire, with the professional / patient interaction would

possibly generate a final result of the satisfactory treatment of both parties leading the dental surgeon to a better diagnosis, a possibly playful and Interrelationship with dental disciplines (Pinto et al., 2014). As we are now seeking at any cost the enhancement of values as; Of course, we must evaluate these individual values and associate them with the analysis of photographs and universal aesthetic concepts and study of optical perspectives through acquired plans and technological resources. We can use this range of knowledge including a Review of psychoanalytical articles to propose a treatment plan that would enhance their self-esteem (Pinto et al., 2014). The objective of this study was to focus the applicability of dental smile designs in the planning of two aesthetic cases and how this software facilitates the execution of these treatments. To point out the importance of using DSD for diagnosis and as a means of reproducing beauty; Demonstrate the advantage of

planned treatments in an integrated way; To point out the main interventions and techniques used to reestablish beauty and harmony.

Case 1

Patient S had a need for gingival remodeling. The guidelines for waxing were: - waxing from 14 to 24; - teeth 14 and 24 minimum volume in the vestibular possible; - teeth 13 and 23 volume in the vestibular to correct palatinization; - teeth 12, 11, 21 and 22 little volume in the vestibular and small incisal increase according to drawing; - teeth 11 and 21 will not need to wax on the gingiva because it has already been made gingival plastic - we will mold again after healing (Figures 1 and 2).



Figure 1. Case 1- before



Figure 2. Case 1- after

Case 2

Patient I, Dental proportion of 80.0 % (Figures 3 and 4).

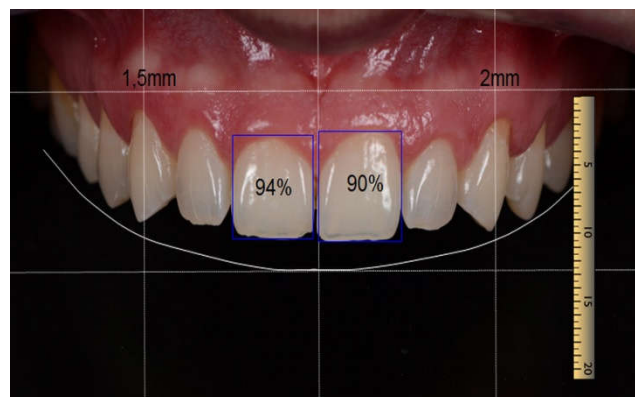


Figure 3. Case 2- before



Figure 4. Case 2- after

DISCUSSION

The two clinical cases of the present study with the DSD enabled the professional to better understand patients, their particularities, desires and needs. The dental plastic can be characterized as the total conformation of the teeth using all the resources available to the dentist, to provide beauty to the teeth and consequently a better appearance to the individual (Ahmad, 2010; Assaf, 2014; Bandéca *et al.*, 2010). For health promotion, the teeth must be within the standard of beauty adopted today, that is, clear teeth with defined shapes, well positioned and aligned in the mandibular and maxillary arches and, mainly, present the same form of their control -side. Some of the frequent conditions that break smile harmony are the color, shape and length of the misaligned teeth (Baratieri *et al.*, 2002; Bissau and Al-Houri, 2014; Brandão and Brandão, 2013; Cairo *et al.*, 2012). The modifications that the dental plastic can give to the teeth are very accentuated and they occur in a short period of time, being able in the first moment to cause to the patient the sensation that its teeth are disproportional (Calixto *et al.*, 2010).

The power of attraction of the human face depends on the balance of a set of facial, gingival and dental analysis (Calixto *et al.*, 2011). For this, the integration between the different specialties has become basic and indispensable in the planning and execution of the treatments in the present day (Calixto *et al.*, 2011). It is necessary to work with multidisciplinary to offer the best, seeking a balance of the set-teeth, gingiva and face-making it favorable to search for the success of the final result: improvement of self-esteem, quality of life and well-being (Calixto *et al.*, 2011; Câmara, 2010). Dental analysis, aiming at establishing aesthetics, is performed in two ways: by the actual size of the teeth and their appearance, given the curvature distribution in the dental arch (Cardoso *et al.*, 2011). This last criterion is made by applying the Golden Ratio. The ratio between the major and minor side of a rectangle being 1.618 (Golden Ratio), for Pythagoras, makes the figure particularly beautiful (Censi *et al.*, 2014). Within this concept, the apparent width of the canine is taken as 100.0 %. From this measure: The right and left central incisors will have 25.0 % of the value (each), the right and left lateral incisors will have 15.0% of the value (each), The right and left canines will have 10.0% of the value each (Censi *et al.*, 2014; Clavijo *et al.*, 2007). Because they present with the vestibular face parallel to the frontal plane, in a frontal view, the central incisors will occupy in half the distance between the canines (Dantas *et al.*, 2014). In a harmonious and aesthetic smile, there is a need for teeth with aesthetic proportions (relation height / width of the crown), symmetry, golden ratio, incisor edges of the upper teeth following the curvature of the lower lip, presence of buccal corridor (Espin and Buendia, 2013). The dental proportion is the quantitative relation of the size or dimension

of two elements of the same nature. It is the division of its width by its length. The ideal ratio / width / crown length is 70.0 -80.0 % (Goettems *et al.*, 2011). Understanding the factors that help or detract from the attractiveness of the smile is an important step towards creating a beautiful smile. Standards and standards should ensure the creation of the desirable "golden smile." These standards are applied with diagnostic methods and aesthetic treatment plan (Goldberg *et al.*, 2010). The evolution of aesthetic restorative materials has given the clinician and expert a means to offer the patient appropriate treatment for the various situations (Pinto *et al.*, 2014). For this, the professional must keep in mind that aesthetics is a subjective concept, related to social, cultural and psychological factors (Pinto *et al.*, 2014). The professional must understand the patient's primary needs, listen carefully to their expectations and desires, to define their personality, expectation of treatment and degree of demand. The sequence of the photographs is important for a good communication between the professional and the patient. Diagnostic waxing is an important and fundamental step to have predictability and success in the final aesthetic outcome (Pinto *et al.*, 2014).

Aesthetic evaluation begins with a smile (Assaf, 2014). If the images evaluated are beautiful and healthy teeth, the surrounding frame is the soft tissues of the support structure, the lips and their orientation to the face (Assaf, 2014; Bandéca *et al.*, 2010). The overall aesthetic parameters are the smile line in harmony with the incisal plane, the midline, the incisive edge of the upper central incisors should fall within the wet-dry line of the lower lip to facilitate the path of the lip closure, incisor plane and the buccal corridor (Bandéca *et al.*, 2010; Baratieri *et al.*, 2002). The smile line refers to an imaginary line that is tracked along the incisal edges of the maxillary anterior teeth and should mimic the curvature of the upper lip border while smiling (Câmara, 2010; Cardoso *et al.*, 2011; Censi *et al.*, 2014; Clavijo *et al.*, 2007). The lip line, not to be confused with the smile line, refers to the position of the lower edge of the upper lip and thus determines the display of either tooth or gum on this interface of hard and soft tissue. The smile line along with aesthetic, phonetic, and function helps to determine the position of the incisive border and influences the length of the upper central (Dantas *et al.*, 2014; Decurcio and Cardoso, 2011; Decurcio *et al.*, 2012; Espin and Buendia, 2013).

Conclusion

The two clinical cases of the present study with the DSD enabled the professional to better understand patients, their particularities, desires and needs. Thus, with this technique, a good diagnosis can be obtained, guaranteeing a maximum proportion of the smile in relation to the face, with results of excellence and patient satisfaction. DSD came to revolutionize what is most complex in smile aesthetics in dentistry. However, care must be taken not to create great expectations for the patient and can not be achieved.

Conflict of interests

There is no conflict of interest between authors.

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