

The Influence of Bilateral – Buccal Corridors on the Smile Aesthetics of the Faces

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Abstract

Facial aesthetic is an important aspect of facial attractiveness as well as of the attractiveness of the young people in general. Facial appearance not only appears to be an influential quality in being asked as a dating partner, but handsome people are also thought to have a nicer personality (Cunningham, 1986; Cunningham et al., 1990; Feingold, 1990; Riggio et al., 1991).

The main aim of this study is to evaluate the influence of different intraoral buccal corridors on smile aesthetics.

For this study were included 20 patients ten males and 10 females. A full frontal facial photographs were also obtained and three different sizes of buccal corridors were digitally created.

The images were evaluated by 20 orthodontists and 20 non dentists(lay persons) using a 100-mm analogue visual scale.

Intermediate buccal corridors received higher scores than the small buccal corridors, which negatively influenced the scores for posterior teeth inclinations($p<0.001$).

The results were compared by two-way ANOVA for repeated measures for all groups.

Introduction :

Facial aesthetic is an important aspect of facial attractiveness. It is well known that faces with intermediate buccal corridors are generally more attractive than faces with large buccal corridors or small buccal corridors. Perfect smile is a smile associated with intermediate bilaterally buccal corridors, which play an important role in psycho-social interaction of young population. One of the primary goals of the orthodontic treatment is to provide a good facial aesthetic appearance.

Aim:

The aim of this study was to evaluate the influence of different intraoral buccal corridors on smile aesthetics. The buccal-lingual inclinations of upper canines and buccal-lingual inclination of upper posterior teeth, to correlate the preference for these inclinations with different sizes of buccal corridors and to evaluate whether the aesthetic perception is the same when determined in whole face only-images. The dimension of bilaterally buccal corridors depend on the buccal-lingual inclination of upper canines an posterior upper teeth.

Material and methods:

For this study were included 20 patients ten males and 10 females. They were from 18-30 years old, which was considered as a representative number for the aims of this paper.

A full frontal facial photographs were obtained and three different sizes of buccal corridors were digitally created: Firstly, a large buccal corridor with 16%(per right and left) side, secondly an intermediate with 8%, also, a small with 1%.Three

different buccal-lingual inclinations(10 scale, buccal , 0 scale, 10 scale lingual)for canines and posterior teeth were also created. The three images ,the buccal-lingual inclination of canines and posterior teeth were also changed generating three different inclinations for these teeth 10 scale palatallyinclined9 P):0 scale(V) and teeth with buccaly inclined (B).

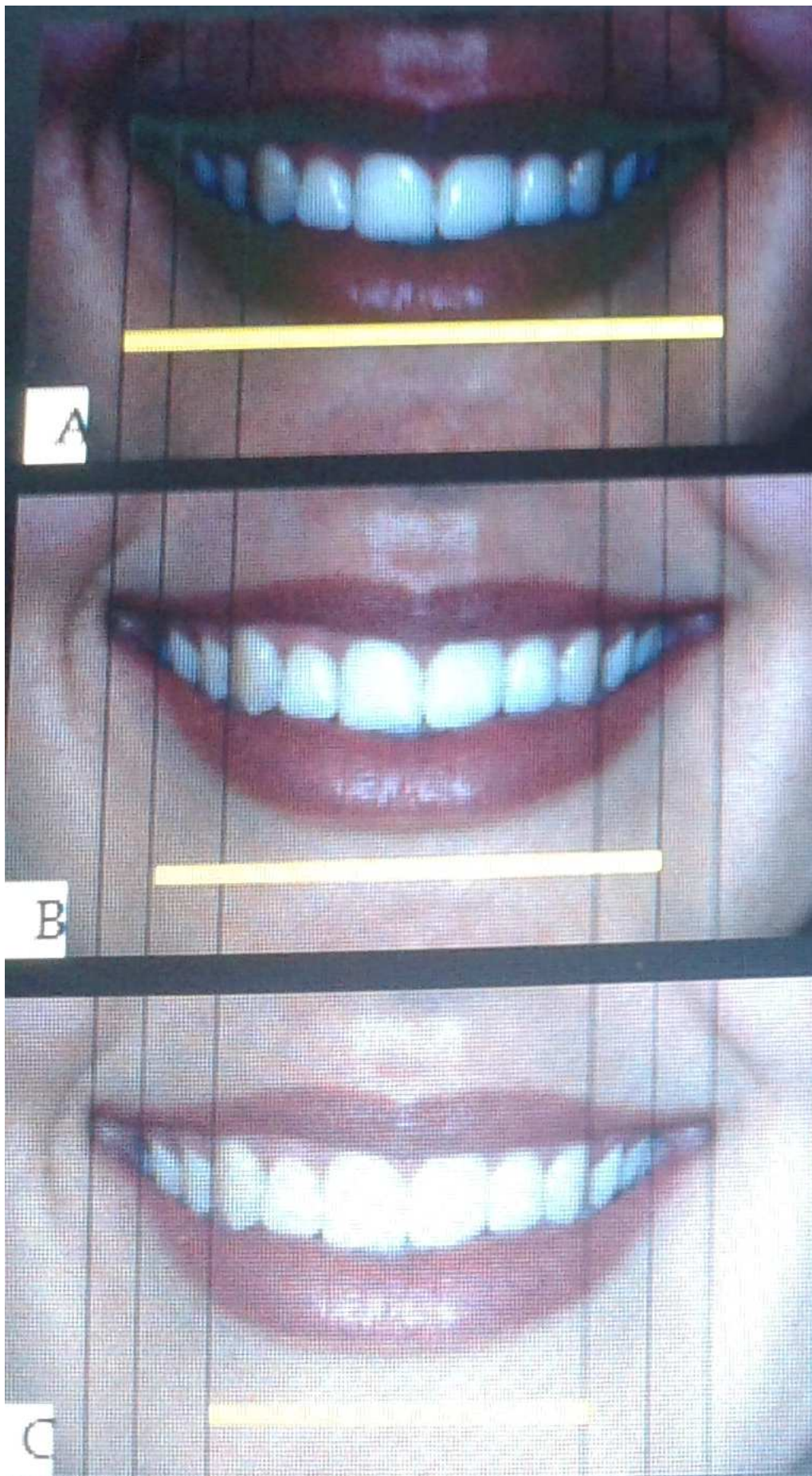
Posed smiling photographs were taken at a constant object-to-lens distance (100cm) with a Nikon D-40 digital camera. The photographs were imported into Photoshop to eliminate any rotations due to head positioning. Facial blemishes and facial hair were removed from the smiling photographs.

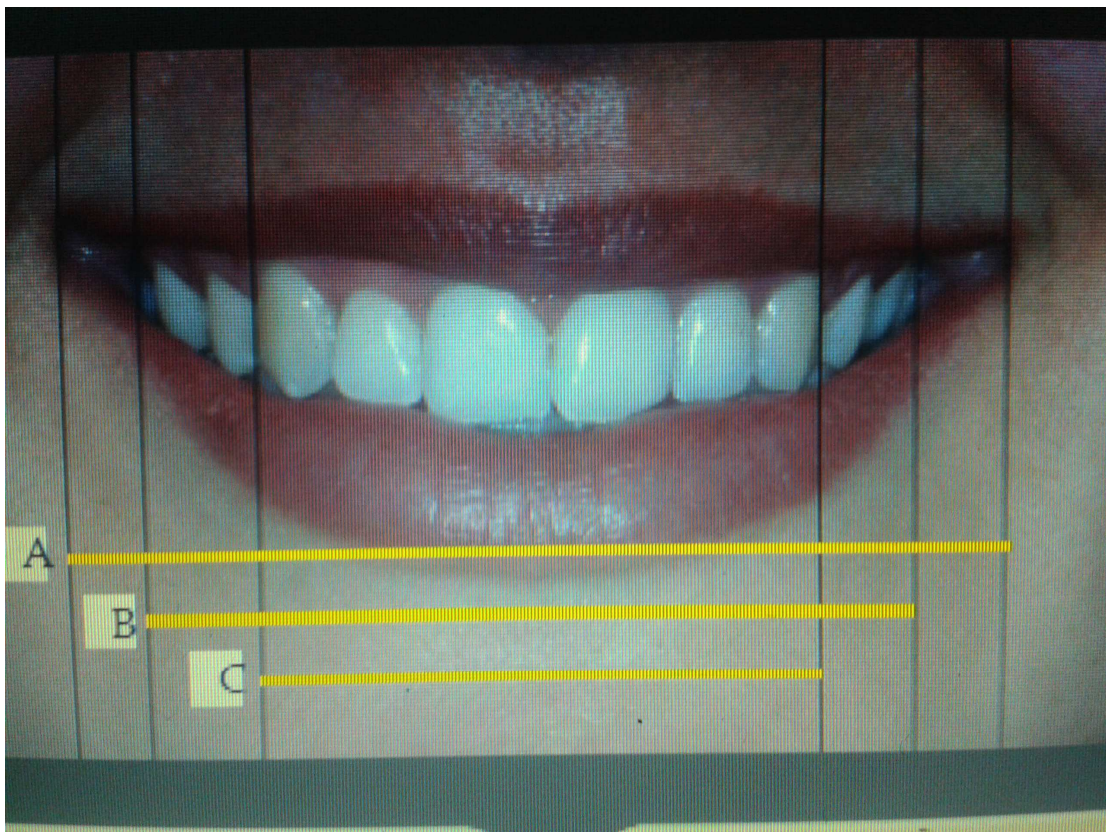
Facial photo images were taken in maximally smiled pose. The images were evaluated by orthodontists and non dentists (n=20 for each group) using visual scale. For all images a smile close -up was cut out, for forming a new full set of photographs The images were colour printed, and were presented to evaluators on boards containing three images each, smile-close-ups.

In each of three images only one variable was changed between images, either the buccal corridor of the inclination .

The images were evaluated by 20 orthodontists and 20 non dentists(lay persons) using a 100-mm analogue visual scale. The standard deviations were used to describe different buccal corridors, and buccal and lingual teethe inclinations. According to ANOVA, repeated measures were used in order to evaluate the influence of posterior teeth inclination on the attractiveness of the buccal corridors. To evaluate whether the aesthetic is the same in facial and smile closes-up images all the results were compared by paired Student t-test. Level or significance was established in 5%.

Here are some photos of buccal corridors in a frontal view:







Results:

Intermediate buccal corridors received higher scores than the small buccal corridors, which negatively influenced the scores for posterior teeth inclinations ($p < 0.001$). Palatally inclined canines and posterior teeth had higher scores than buccally inclined teeth, which negatively influenced the scores for buccal corridors ($p < 0.001$). The differences between scores for facial and smile close-ups, demonstrated that orthodontists were less influenced by facial features.

The results were compared by two-way ANOVA for repeated measures for all groups. The intermediate buccal corridors were considered more attractive than decreased buccal corridor for all groups ($p < 0.001$). Canines with no inclination or with lingual inclination were considered more attractive by two groups (0.001). No dentists give higher scores than orthodontists. The intermediate buccal corridors with vertical position or lingual inclination teeth gives most beautiful appearance of the attractiveness faces.

Conclusion:

According to the results gained from this paper there are few main conclusions which are explaining and describing the study and its results and effects. Those are the following:

1. The intermediate buccal corridors was considered the most attractive by all groups which are include in this study.
2. Palatal inclined or vertical positioned canines and posterior teeth are considered aesthetically pleasing by all groups of evaluations.
3. Posterior teeth and upper canines with buccal inclinations negatively influenced the scoring for the different buccal corridor sizes.
4. The intermediate buccal corridors had a positive influence on the different buccal-palatal inclination scores.
5. Orthodontists were more critical than non orthodontists
6. Correlation between face and smile close-up scores was high for orthodontists .

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