

COMMENTARY

EVALUATION OF “GOLDEN PROPORTION” IN INDIVIDUALS WITH AN ESTHETIC SMILE

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This investigation evaluates the existence of the golden proportion in subjects with an acceptable alignment of their maxillary anterior teeth. The relationship between the widths of the maxillary anterior teeth is especially important today in subjects who are congenitally missing their maxillary lateral incisors and are to receive either resin-bonded bridges or implants. Typically an orthodontist treats these patients initially to create sufficient space for the implant or pontic. Can the golden proportion be used as a natural guide to determine the size of this space? This question is addressed in the above investigation.

The subjects for this study were selected from a large pool of dental students. Individuals with an unacceptable alignment of the anterior teeth were rejected. The authors then measured the perceived dimensions of the anterior teeth on photographs to determine whether the golden proportion could be identified in this specific population. According to this study, a consistent proportion between the widths of the maxillary central and lateral incisors did not exist in their sample. Therefore, the authors reject the concept of the golden proportion as a natural determinant of maxillary anterior tooth proportions.

I agree with the authors' findings. Other articles have researched the same question and have reported similar conclusions. The weak part of this study, in my opinion, is the selection of the sample. Use of a large number of individuals with varying tooth form, arch dimension, and less-than-ideal arrangements may produce conflicting results. In spite of this possibility, the authors have come to the same conclusion as previous studies on this topic—that the golden proportion does not exist in nature.

But is there an ideal *esthetic* proportion between the widths of maxillary lateral and central incisors? That question was addressed recently using computer-generated variations of natural tooth widths. The authors found that narrowing the widths of the laterals bilaterally by up to 3 mm was not perceived as unesthetic, even by dentists.¹ However, if the lateral incisor widths were decreased unilaterally, it was perceived as unesthetic when the difference was 2 mm.² Thus, asymmetry of tooth widths may be a more important factor than absolute proportions in anterior dental esthetics.

REFERENCES

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