

COMMENTARY

CONCURRENCE BETWEEN INTERPUPILLARY LINE AND TANGENT TO THE INCISAL EDGE OF THE UPPER CENTRAL INCISOR TEETH

Vincent O. Kokich Jr., DMD, MSD*

This study by Malafaia and colleagues specifically evaluates the existence of parallelism between the interpupillary line and a line drawn tangent to the edges of the maxillary central incisors. Their objective was to emphasize the importance of polar symmetry as one factor that affects facial harmony and ultimately contributes to achieving successful treatment and adequate esthetics. The authors selected 102 Brazilian dental students ranging from 20 to 25 years old with no missing teeth, periodontal disease, incisal restorations, or history of orthodontic or facial surgical treatment.

Frontal smiling photographs were taken of all 102 subjects in order to expose the incisal edges for measurement. The students were classified into groups based on the presence or absence of parallelism between the two lines and also according to gender. In their sample, they discovered a statistical significance between the parallelism of the interpupillary and maxillary incisal edge tangent lines regardless of gender. However, interestingly parallelism was seen more often in women (60%) than in men (40%).

This study presents interesting data as it relates to identifying facial symmetry. However, it does not fully develop specific clinical relevance. Previous research has identified threshold levels at which varying degrees of occlusal and incisal plane asymmetries become noticeable to the general patient population.¹⁻⁴ This type of information ultimately helps the team generate the most appropriate treatment plan for the patient based on what is perceived as esthetically acceptable. In the future, it would be nice to see a clinical application developed that would effectively utilize the measurement parameters discussed in the present study.

REFERENCES

1. Padwa BL, Kaiser MO, Kaban LB. Occlusal cant in the frontal plane as a reflection of facial asymmetry. *J Oral Maxillofac Surg* 1997;55:811-16.
2. Kokich VO Jr, Kiyak HA, Shapiro PA. Comparing the perception of dentists and lay people to altered dental esthetics. *J Esthet Dent* 1999;11:311-24.
3. Geron S, Atalia W. Influence of sex on the perception of oral and smile esthetics with different gingival display and incisal plane inclination. *Angle Orthod* 2005;75:778-84.
4. Ker AJ, Chan R, Fields HW, et al. Esthetics and smile characteristics from the layperson's perspective: a computer-based survey study. *J Am Dent Assoc* 2008;139:1318-27.

*Affiliate associate professor, Department of Orthodontics, University of Washington Dental School; and private practice, Tacoma, WA, USA