Commentary

A review of: Stability of maxillary surgery in openbite versus non-openbite malocclusions, by T. F. Denison et al. (1989)

James L. Case

Suggested Citation

Case, J. L. (1990). A review of: Stability of maxillary surgery in openbite versus non-openbite malocclusions, by T. F. Denison et al. (1989). *International Journal of Orofacial Myology*, 16(1), 24.

DOI: <https://doi.org/10.52010/ijom.1990.16.1.4>

This work is licensed under a [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License](https://creativecommons.org/licenses/by-nc-nd/4.0/).

The views expressed in this article are those of the authors and do not necessarily reflect the policies or positions of the International Association of Orofacial Myology (IAOM). Identification of specific products, programs, or equipment does not constitute or imply endorsement by the authors or the IAOM. The journal in which this article appears is hosted on [Digital Commons](#), an Elsevier platform.

Stability Of Maxillary Surgery In Openbite Versus Non-Openbite Malocclusions

by T.F. Denison, V.G. Kokich, and P.A. Shapiro

from *Angle Orthodontist*, Volume 59(1), pp. 5-10, 1989

Reviewed by James L. Case, Ph.D.

This article is concerned with the treatment and long-term stability of patients with anterior openbite malocclusions treated with LeFort I osteotomies. The patient sample consisted of 66 subjects (55 females) treated with LeFort I osteotomies to reposition their maxillae superiorly. The following three subsamples were delineated on the basis of pretreatment incisal overlap and incisal contact:

- a. Subsample OP: No pretreatment overlap and no contact of mandibular and maxillary incisal edges
- b. Subsample IO: Pretreatment overlap but no contact of mandibular and maxillary incisal edges
- c. Subsample IC: Pretreatment incisal overlap with incisal contact

All patients were considered nongrowing, had Angle Class I or Class II malocclusions, and had available cephalometric radiographs pretreatment (T1), posttreatment (T2), and at least one year posttreatment (T3). All cephalometric radiographs were traced using eight dental and skeletal landmarks testing facial height, overbite, overjet, incisor vertical position, and molar vertical position.

On the basis of statistical analysis, the following conclusions were made:

1. 42.9 percent of the subsample with a pretreatment openbite (OP) demonstrated clinically and statistically significant increases in vertical height, eruption of the maxillary molars, and decreases in overbite posttreatment.
2. 28.6 percent of the openbite subsample (OP) and 16.7 percent of the overlap subsample (IO) demonstrated clinically and statistically significant increases in facial height, eruption of the maxillary incisors, and no change in overbite posttreatment.

3. Six patients in the openbite subsample (OP), or 21.4 percent, exhibited reopening of the anterior openbite beyond incisal overlap during the posttreatment period.
4. The contact subsample (IC) and 83.3 percent of the overlap subsample (IO) exhibited no clinically significant posttreatment changes.
5. No correlations existed between treatment changes and posttreatment changes in all three subsamples.

In the discussion section, the authors provided several explanations for their findings and at the same time asked several questions to be considered by future research. One significant finding was that 42.9 percent of those subjects with a pretreatment openbite experienced recurrence of the openbite in the posttreatment (T3) evaluation. The authors stated as one of the possible explanations: "Although dental and skeletal malrelationships can be corrected, the role of orofacial musculature also must be addressed in orthodontic therapy. If tongue posture and hypotonic buccal musculature can cause a pretreatment openbite, it is conceivable that recurrence of the openbite after treatment could be due to the same etiology. The stability of openbite correction may increase if the etiology of the openbite is eliminated during treatment" (p. 9).

This article provides the oromyologist with further support to evaluate and treat any abnormal orofacial involvement in patients with openbite who are to be treated with LeFort I osteotomies.