

Commentary: Simultaneous intrusion and retraction using a three-piece base arch

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This is a lucid account of the methods used to intrude the incisors, particularly flared incisors. After reviewing the various methods available, the authors propose a three-piece base arch composed of a rigid stainless steel section that extends distal to the lateral incisors, with two intrusion sectional arches with 45-degree tipback bends that hook onto the anterior arch. A transpalatal arch augments the molar anchorage and a light tieback of the anterior base arch enhances the retraction of the anteriors as they are intruded. The appliance design places the intrusive force lingual to the center of resistance of the incisors, assuring that they will be retracted rather than flared.

The figures clearly show the forces and moments created by the system. The authors emphasize the importance of determining the components of the deep overbite so that treatment can be planned that will direct proper forces to the area requiring correction. A deep overbite due to overeruption of the lower incisors should not be corrected by intruding the upper anteriors. Yet many orthodontists rou-

tinely place archwires with reverse curve of Spee in the lower arch and exaggerated curve of Spee in the upper arch. Such treatment could lead to hiding the upper anteriors behind the upper lip.

A weakness of the report is the choice of malocclusion in the case report. The initial occlusion does not have a deep overbite that requires extraordinary attention. In fact, its steep mandibular plane angles place it at risk to develop anterior openbite. Nevertheless, the photographs demonstrate with clarity the elements of the three-base archwire system.

The missing ingredient in analyzing the total force system acting in the dentition is the force generated by chewing and its impact on tooth movement. The inevitable result of an intrusive force on the anteriors is an extrusive force on the posterior teeth. Whether this side effect becomes manifest is determined by the forces of occlusion.

This paper makes a useful contribution to appliance design by facilitating our ability to initiate force systems upon the teeth that are uniquely designed for treating the specific characteristics of the malocclusion.