

Case Report

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At the time of examination this seventeen year old boy possessed good general and oral health. His malocclusion was classified as Class I. Except for the maxillary incisal area, case exhibited well-developed upper and lower arches with normal well-balanced buccal occlusion. The upper anterior teeth from the left cuspid to the right lateral incisor had been deflected to the lingual and were almost entirely hidden by the mandibular incisors and cuspids. There was more than a millimeter of space between the lower cuspids and first bicuspid.

ETIOLOGY

Evidently, prolonged retention of the upper deciduous teeth had forced the upper incisors and left cuspid to erupt to the lingual of the mandibular incisors. This, in turn, carried the six lower anterior teeth labially and created a space distal to the lower cuspids. The overbite was in reverse. The lower incisors and left cuspid covered the entire labial surface of the same teeth

in the maxillary arch.

PLAN OF TREATMENT

First, it was necessary to open the bite before bands could be placed on the upper incisors, as they were in close contact to the lingual of the lower incisors. Next, the upper incisors and left cuspid should be moved into proper arch alignment, until they are in labial relation to the lowers. Finally, after accomplishing this and allowing the teeth to close normally, the spaces between the lower cuspids and first bicuspid should gradually close without appliances.

APPLIANCE THERAPY

The plan of treatment was carried out as follows — first, a splint, as shown in Figure 1, was constructed by placing the casts in occlusion on an articulator which was adjusted to open the bite in the incisal region about seven millimeters. Steel clasps, .030, were fitted to the lower first molars and a lingual bar fashioned by bending a

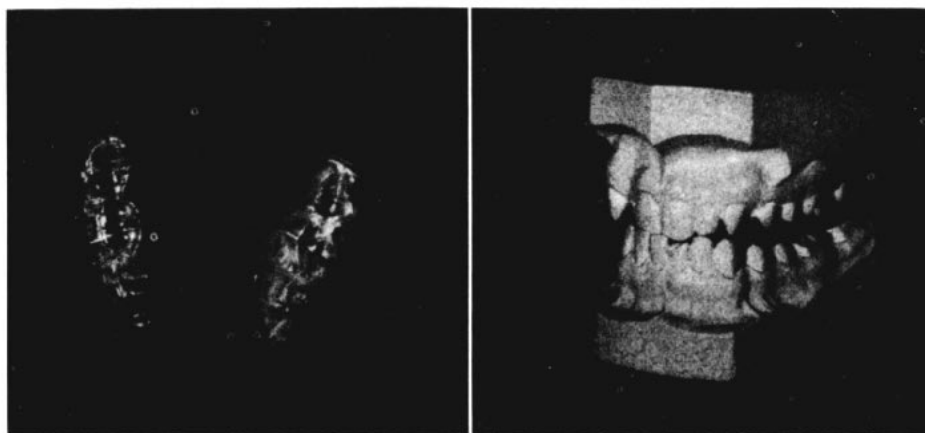
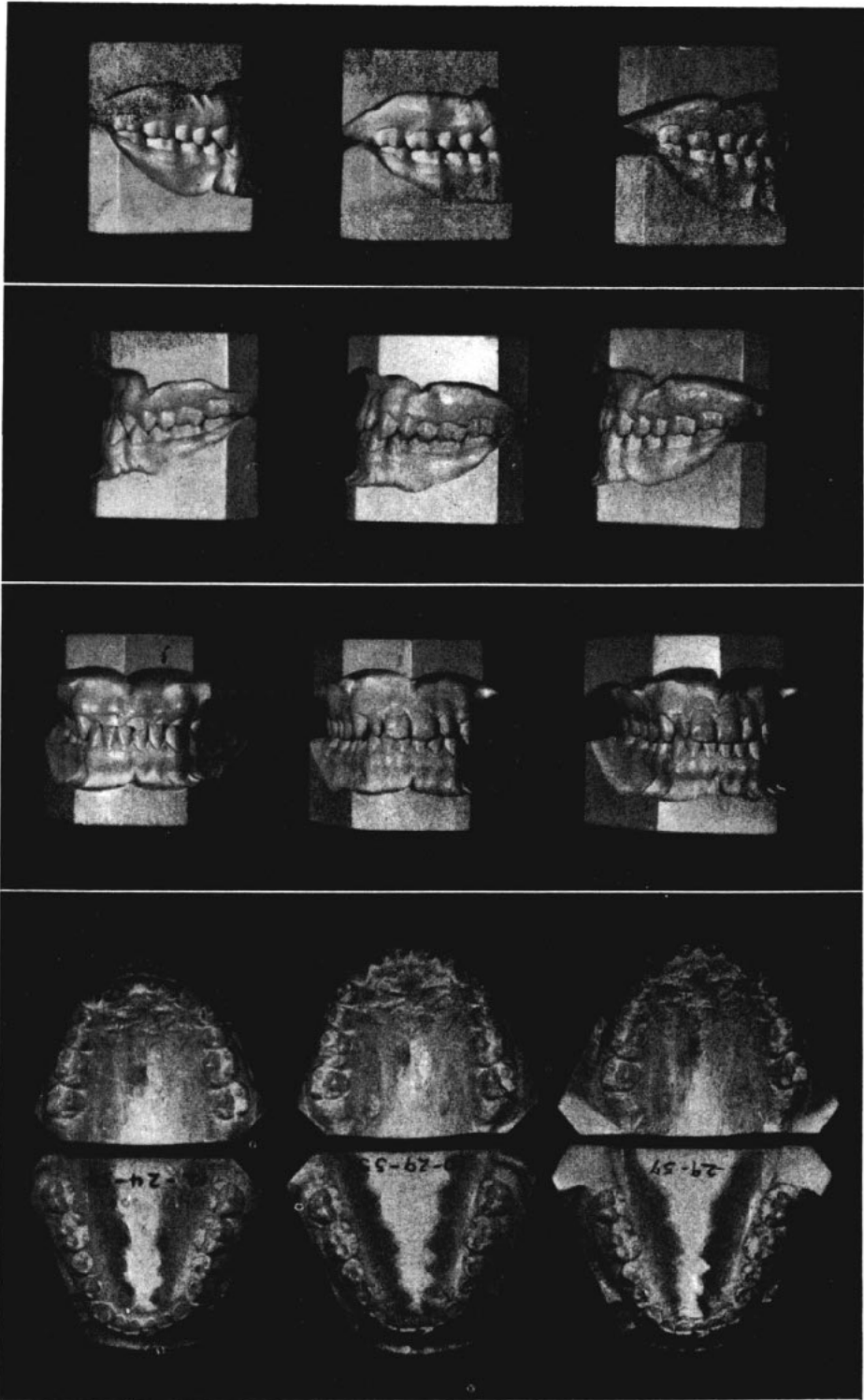


Fig. 1 Acrylic splint and original casts with splint in place.



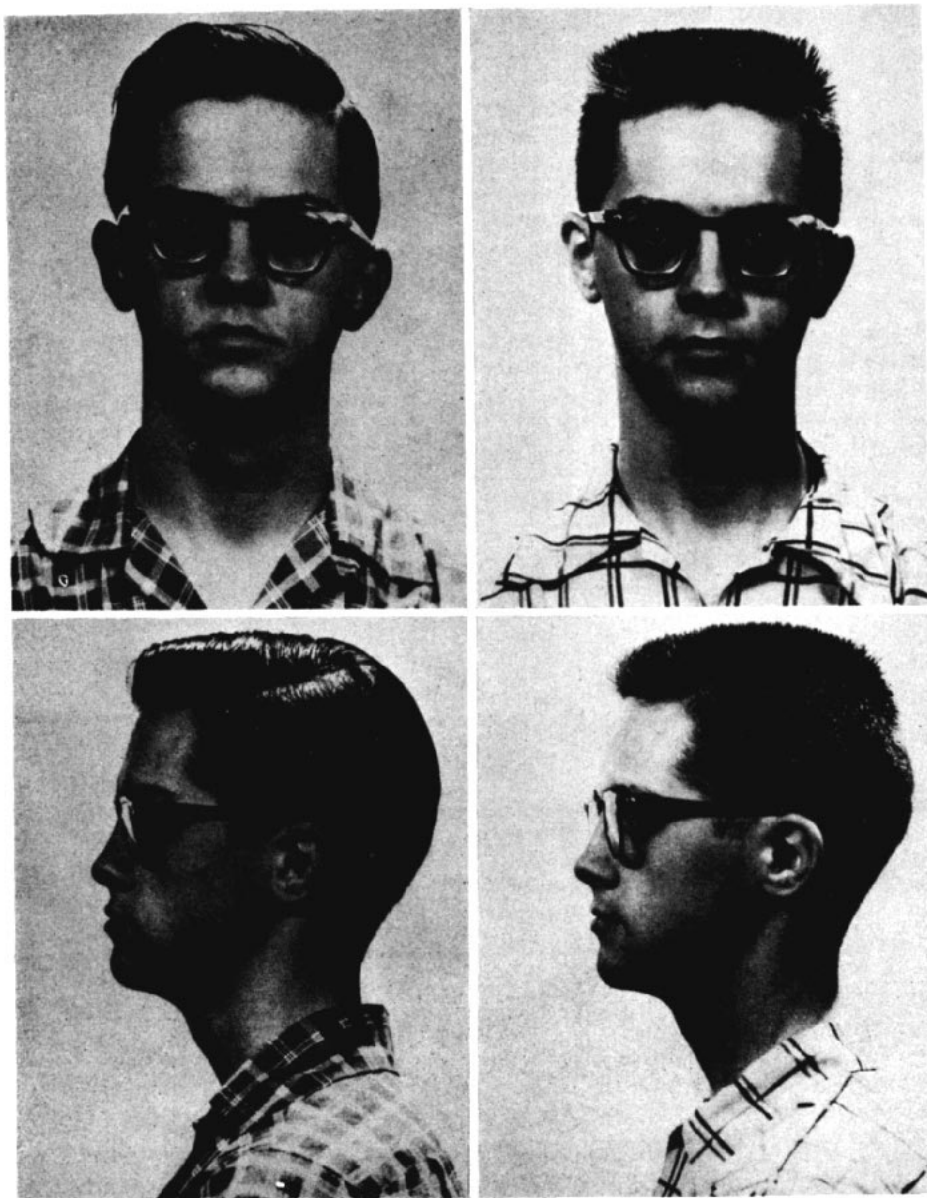


Fig. 3 Left, before treatment. Right, after treatment.

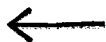


Fig. 2 Left, before treatment. Center, at end of active treatment. Right, twenty months after removal of appliances.

steel wire .055 in diameter (not touching the lower incisors). The case was waxed to fit the occlusal fourth of the lower bicuspid and molars and the occlusal of the upper posterior teeth. From this, an acrylic splint was processed to be worn constantly until the upper incisors were in normal occlusal relation. An edgewise appliance was placed on the *upper arch only* from first molar to first molar. With the bite open, there was nothing to antagonize the labial movement of the upper anterior teeth. As a result, they were moved into a harmonious arch relation in a few months.

When these teeth were far enough forward to close in normal labial relation to the lower incisors, the splint was removed. The labial relation of the upper incisors to the lowers soon closed

the spaces distal to the lower cuspids. When the upper bands were removed, after ten months of treatment, there was some spacing of the upper incisors to conform to the lowers which had previously been carried labially by the upper teeth.

No retention was used and after twenty months the spaces distal to the lower cuspids had entirely closed.

COMMENT

Due to the fact that the upper lip covered the incisal fourth of the lower incisors, there was little change in the lip position. The case would have been difficult to treat without the splint; however, with the splint, it proved to be quite simple with no lower appliance and without retention.

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