Case Report

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DIAGNOSIS

This case presents a Class II, Division I malocclusion complicated by loss of the mandibular first molars, due to carious exposures, and a complete cross bite of the buccal segments on the left side. There was a loss of contact between the mandibular cuspids and laterals resulting in a crowding of the mandibular incisors and forward displacement of these teeth over basal bone. Facial aesthetics was poor, and the bite severely closed.

HISTORY

Patient was a female thirteen years of age. The girl was over-weight possibly as a result of endocrine disturbance. A basal metabolism taken by her physician proved to be normal. Her oral bony structure was good and showed no porosity indicative of hypothyroidism. Her mandibular first molars showed carious exposures and were extracted. All other carious teeth were filled.

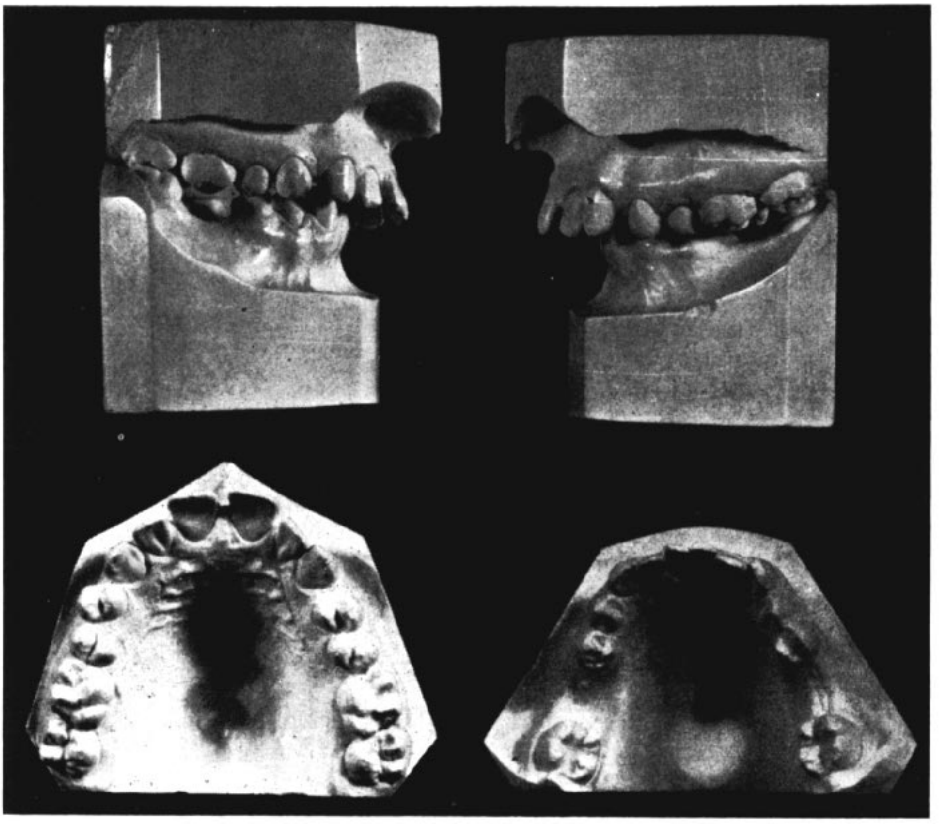

Fig. 1 Case before treatment.

Etiology

The etiology in this case seemed to be a combination of faulty breathing resulting in the Class II malocclusion, a sleeping and leaning habit producing the cross bite, and possibly some hereditary factors were involved.

Plan of Treatment

Treatment objectives were to reduce the maxillary protrusion and cross bite. Inasmuch as the mandibular first molars had to be extracted, it was decided to move the second molars forward and at the same time move the mandibular incisors and buccal segments distally and place them over basal bone, improve facial aesthetics as much as possible and achieve normal mesio distal relation of both arches and open the bite (Fig. 1).

An edgewise arch mechanism was placed in the mandibular arch and an .040 gold lingual arch. A ribbon arch appliance was placed in the maxillary arch.

Progress

This case was under active treatment from March of 1948 until November of 1949, a period of twenty months. A bite ridge was used to open the bite while the crossbite was corrected by means of cross rubbers assisted by the lingual arch. The patient was seen every two weeks for necessary adjustments. The cross bite was corrected first, spaces were closed in the mandibular arch by means of tie backs and intramaxillary elastics. The maxillary protrusion was corrected by means of Class II elastics assisted, I'm sure, by good mandibular growth during treat-

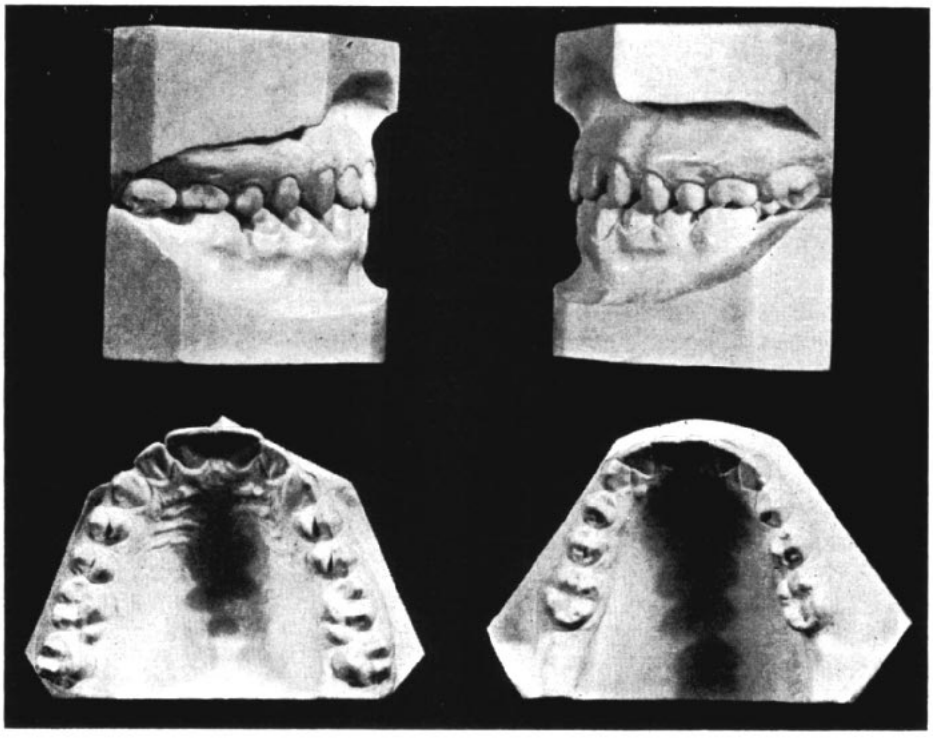

Fig. 2 Case at completion of treatment.

ment (Fig. 2).

Secondary Treatment

After appliances were removed, a positioner was constructed and worn by the patient at night for a period of ten months and every other night for an additional three months. An upper Hawley retainer was then worn at night for an additional six months and all retainers were discarded. Finger springs were attached to the upper Hawley to prevent extrusion of the upper second molars until the lower third molar teeth erupted.

Results

Treatment objectives were achieved. Normal mesiodistal relationship of arches was established, the crossbite corrected, mandibular incisors were set up over basal bone, the bite was opened and facial aesthetics improved.

Conclusions

This case, I feel, was successfully treated and I believe the prognosis is good. Actually the loss of the mandibular first molars was unfortunate, but proved to be more of a benefit than a handicap in treatment procedure.

Post Treatment Findings

Intraoral x-rays taken in January of 1955 revealed a very slight amount of root resorption on the maxillary incisors. The mandibular third molars have erupted in contact with the second molars. A slight space has opened between the lower right second molar and the second bicuspid. This should be closed by operative procedures. The

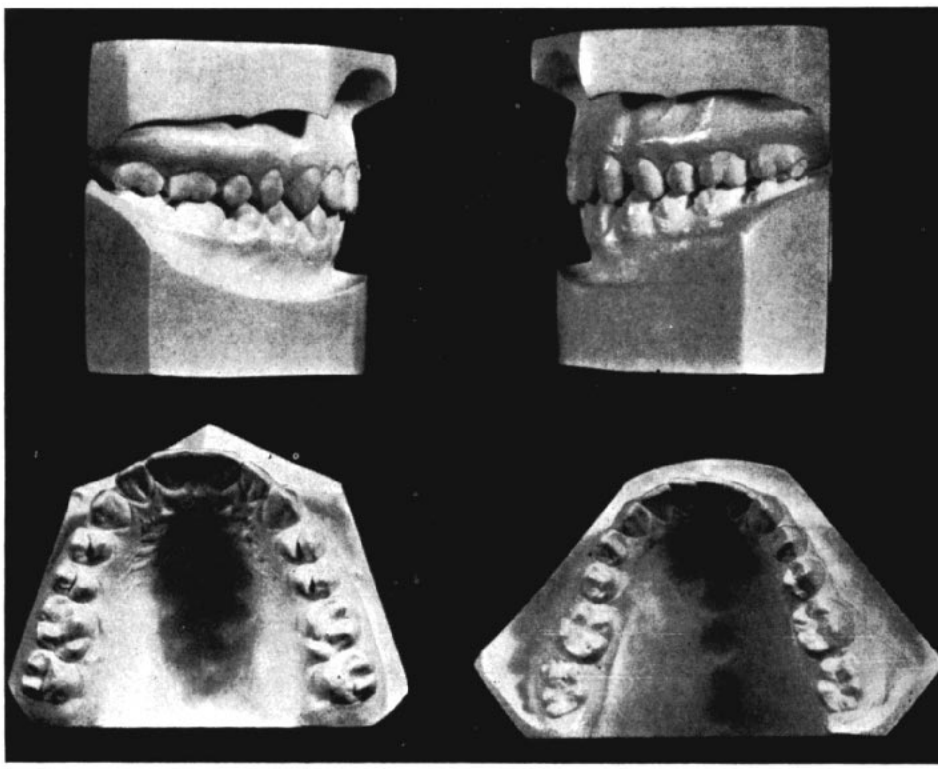

Fig. 3 Three years out of retention.

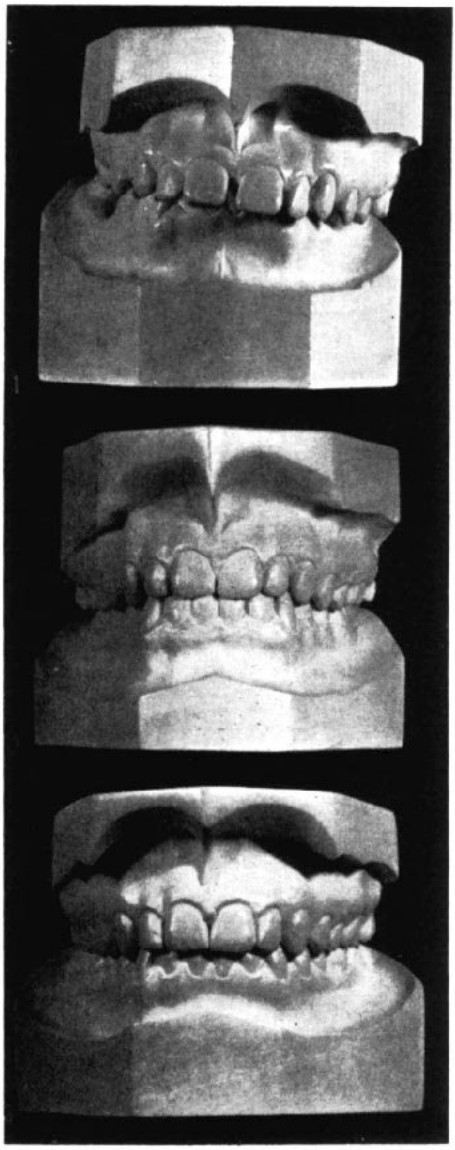

Fig. 4 1) before treatment, 2) at completion of treatment, 3) three years out of retention.

upper third molar teeth have not as yet erupted (Fig. 3). Upon their eruption I have advised their removal as they will have no antagonist in the lower arch and will be a potential source of trouble.

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Fig. 5 Photographs of case 1) before treatment, 2) at completion of treatment, 3) three years out of retention.