A Case Report

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In recent years this component has, as part of its yearly program, shown a clinically diagnosed and treated case before the membership for their perusal and comment. The following case was presented, not because it was a "trick" case in any manner, but because it offered an interesting final resolution; the case so to speak, carried with it an epilogue.

DIAGNOSIS

This young man was born in May, 1957 and was first seen in June, 1969. Diagnostic records were gathered and the case started in September, 1969. He presented with an end-to-end molar relationship with both overbite and overjet within an acceptable range (Fig. 1).

Clinically, the mandibular arch showed both second deciduous molars and all other permanent teeth to the first molars except the right first premolar which was unerupted along with both second premolars. There appeared to be minimal arch length loss in the mandible. The maxillary arch had left first and second deciduous molars and the right second deciduous molar in place along with both first permanent molars and four permanent incisors which were upright over base. Arch length loss appeared excessive (approximately 16-18 mm) and both canines appeared tissue-impacted high on the labial.

Using diagnostic measurements taken from the Riedel, Downs, Tweed, and Holdaway analyses (Fig. 2), the case showed good anteroposterior maxillary mandibular relationship. SNA was 79.5 degrees, SNB 76, the Y axis 62 and the Frankfort mandibular plane angle 35.

The maxillary incisors were very upright over base and not far forward. The interincisal angle was slightly high and the lower incisors were thought to be extremely upright. The Holdaway difference was 4 which, though large, was not considered excessive.

No functional displacements were observed and the temporomandibular joint was without symptoms. The intraoral radiographs showed little susceptibility to caries and no evidence of local or systemic pathology. All unerupted permanent teeth appeared to be present; crown and root formation were normal.

The profile photograph showed some slight tension and hypertonicity to the perioral musculature upon closure but no overt protrusiveness; the frontal photographs showed good symmetry (Fig. 3). The usual childhood diseases were noted; however, there was no previous history of local or systemic pathology including adverse habits which would appear to influence the severity of the malocclusion.

With the available diagnostic information before them, the members in attendance were asked to fill out a questionnaire which asked: 1) Angle classification, 2) nature of the problem (skeletal, dental, combination), 3) comprehensive treatment plan (extraction, nonextraction) and 4) anticipated problems.

In reference to classification, thirty said it was Class I, five said it was Class II, Division 1, one thought Class II,

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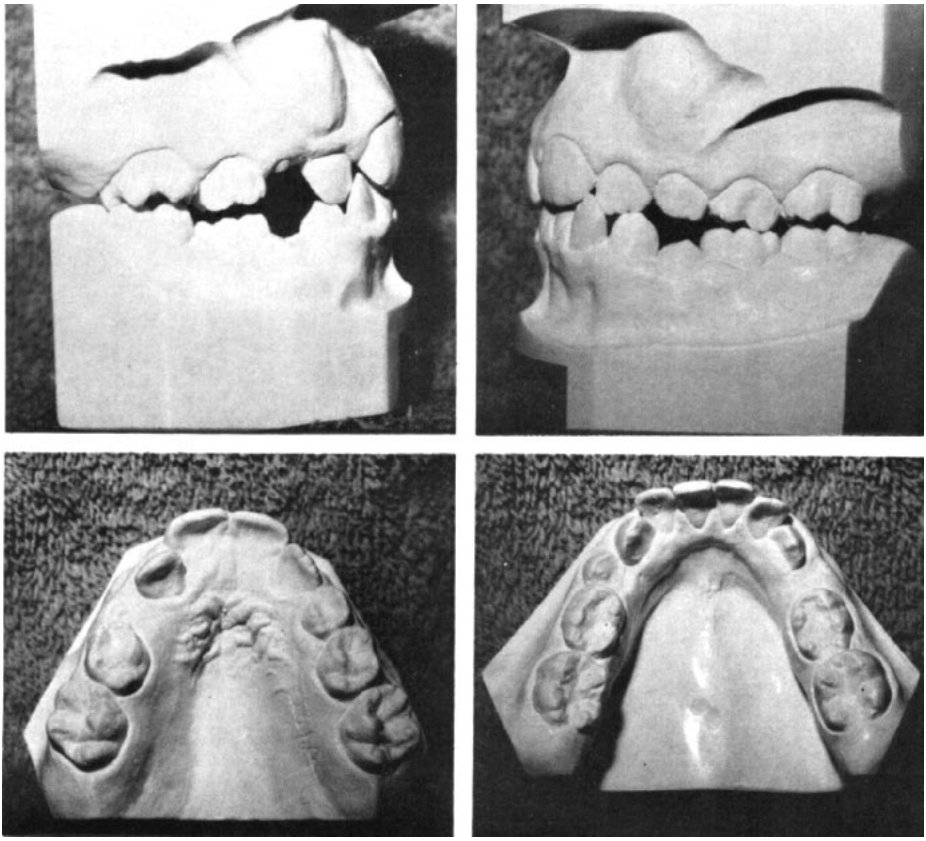
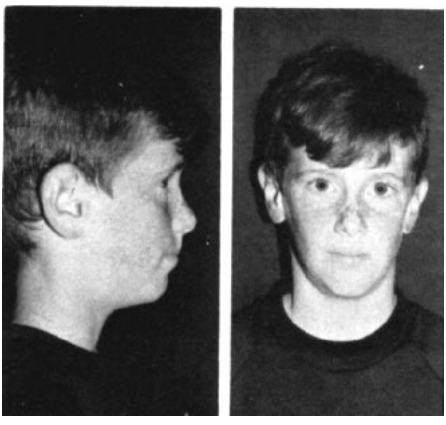
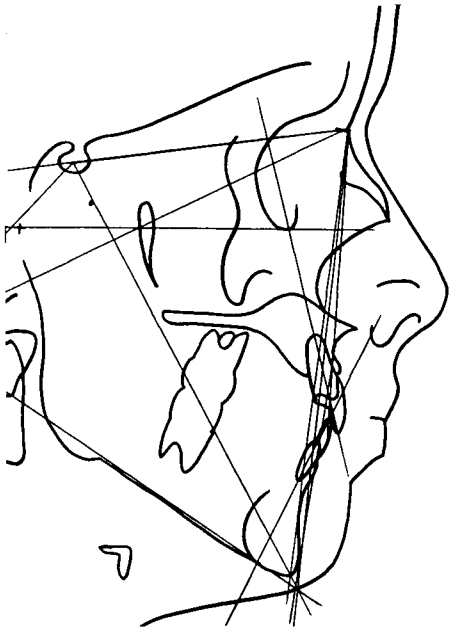






Figs. 1, 2, and 3 Models, photographs and tracing prior to treatment.

Division 2, and one felt it was an incipient Class III. It must be remembered that everyone did not answer every question.

In response to the nature of the problem, seventeen said it was dental and nineteen felt it was a combination skeletal dysplasia and dental problem.

Regarding the treatment plan, twelve said that they would treat it nonextraction (five of whom stated that they would start nonextraction, but would probably have to remove some teeth later into treatment). Fifteen believed they would remove upper and lower first premolars, three said that they would remove upper first and lower second premolars, three that they would extract upper and lower second premolars, and one thought that he would remove upper second molars.

In reference to anticipated problems in retention, nine would anticipate no problems in retention, nine stated they would expect lower anterior crowding, three would anticipate buccal segment relapse, three a Class III tendency, and four an open bite.

In addition a panel of four members was asked to discuss the case in detail and present their treatment plans and anticipated problems. In a sense their diagnoses were immaterial (2 said extraction of dental units and 2 said nonextraction); the important point to remember both with the audience and the panel is that, though there was a general consensus, there was also a wide difference of opinion on how to exercise those options available.

Plan of Treatment

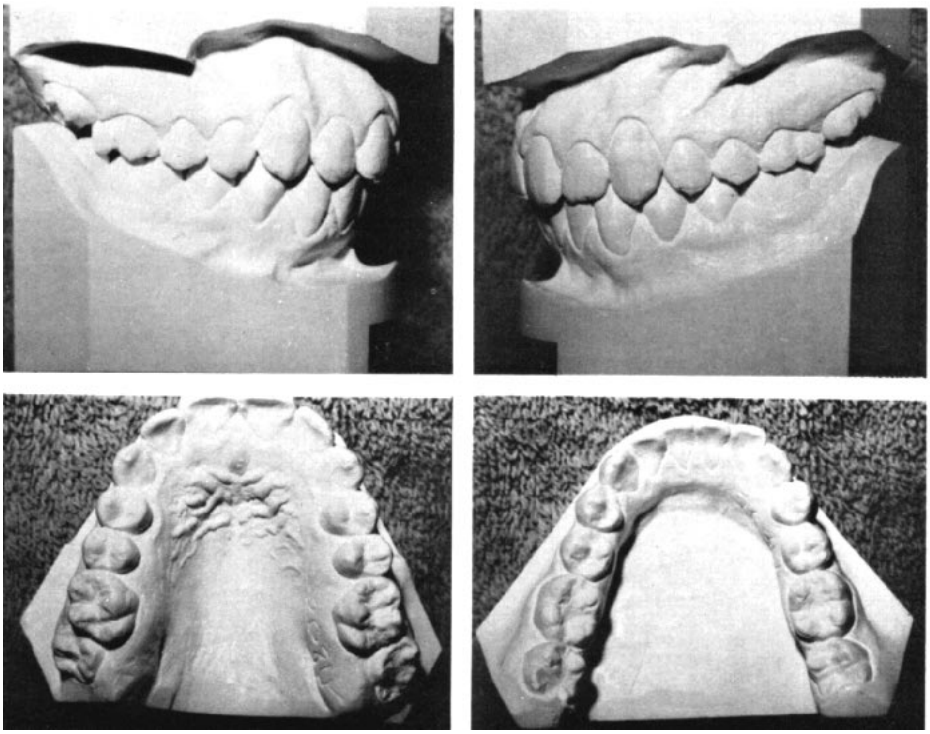
A full edgewise appliance was placed and cervical traction headgear utilized. Initially, an attempt was made to treat without having to remove any permanent teeth. The recommendation, as presented to the parents, was that we would try to align teeth as they erupted and if after a period of time this proved untenable, we would probably have to extract some teeth. The A-B difference was good so there was some projected growth in the picture. Since the anterior dental units were not too protrusive, this did not seem unreasonable at the time. Because lower second molars were to be banded and were very slow in erupting, treatment time lengthened into 39 months before the patient was placed in retention with a rubber finishing appliance (December, 1972). Excellent position of the mandibular anteriors was noted and therefore no additional form of lower mechanical retention utilized. Cooperation with the rubber finishing appliance was good and after nine months, it was discontinued. Posttreatment records were taken May, 1973 (Figs. 4, 5, 6).

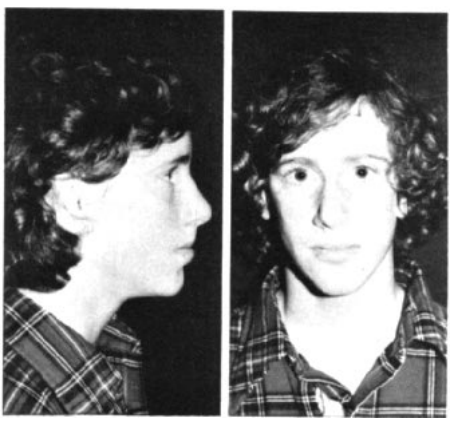
He was observed again in November, 1974, 17 months later; all his third molars were impacted and removal was advised. In addition, considerable crowding of the lower incisors was noted. In April, 1975 the patient was advised of the lower incisor situation once again and he stated that he would have done whatever was advised as long as it was finished within five months time when he would leave for school; thus the epilogue to his original treatment. A lower central incisor was removed and the space closed by the end of July, 1975 (Fig. 7).

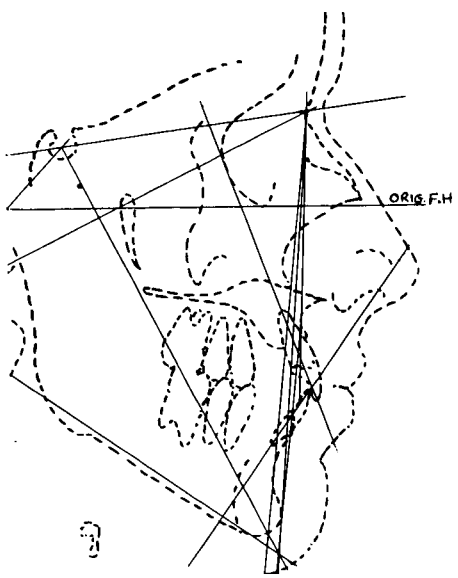
He was last seen December, 1978 (four and a half years after the incisor extraction) at which time records were taken (Figs. 8, 9, 10).

Observations and Conclusions

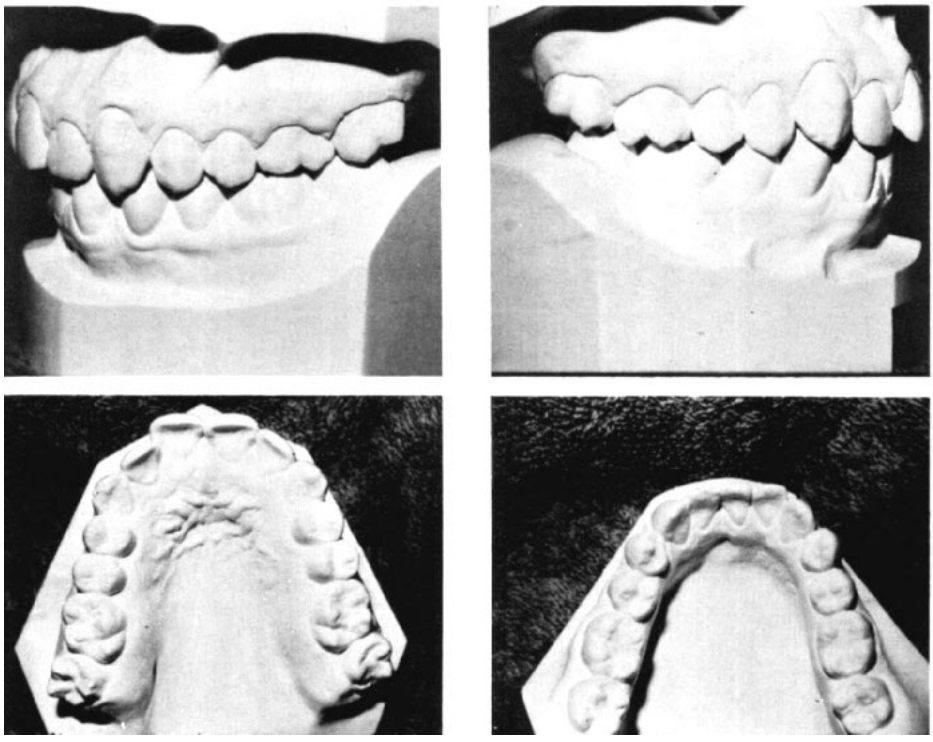
With the treated case before us there is a tendency to think in terms of "right" or "wrong." That is abso-

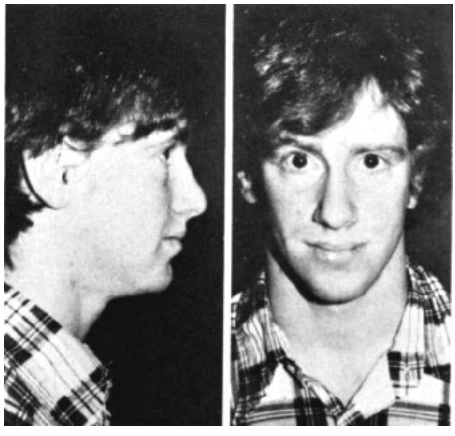






Figs. 4, 5 and 6 Posttreatment records.





Figs. 7 and 8 Final records 4.5 years after incisor extraction.

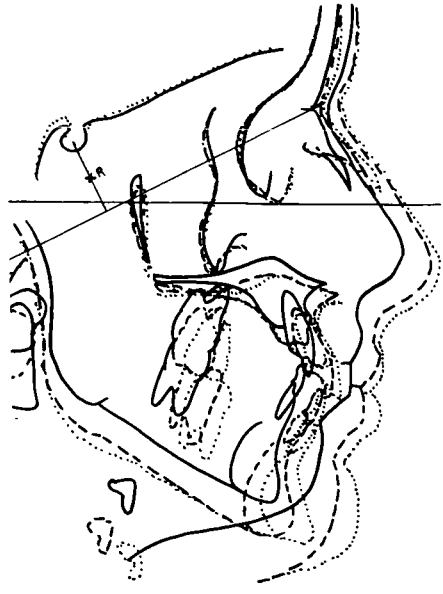


Fig. 9 Tracing of cephalometric radiograph 6 years into retention; superimposition of tracings on "R" point. Solid line, initial tracing at 12 years; dashed, at retention, 16 years; and dotted at final, 21 years, 6 months.

lutely not called for, for there is no right or wrong diagnosis and treatment here. There are different approaches, not one among them without pitfalls, problems and faults. The unfortunate aspect is that we have the opportunity to see the end results of only one approach.

Without question the most important aspect of this discussion is the end result. Is the individual functioning in as fine a manner as we can help provide, is he esthetically acceptable within the perimeters that our treatment effects, and is the stomatognathic system stable? He is missing a lower incisor and has two mandibular third molars severely impacted. Weighed against this is the fact that the impactions are asymptomatic and have to date never bothered him. Some would say that they would not have been impacted had premolars been extracted, but then, too, even with premolar extractions they may have remained so; the point is really moot.

Finally, in assessing our treatment goals of maximum function, esthetics and stability, both buccal segments appear well-interdigitated with a full complement of teeth. Esthetics would appear acceptable to us and he appears stable with healthy, stippled gingivae. In retrospect and in defense of the approach chosen, had we removed four premolars, we might still have impacted third molars, we might still have crowded incisors, and we might still have to worry about four extraction sites. We believe the case presented with an interesting problem in diagnosis and treatment and found resolution in a rather unique manner.

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