

Surgical exposure and traction of deep impacted mandibular first molar : A case report

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Introduction

Impacted molars are frequently observed with second and third molars but rarely with the first molars.

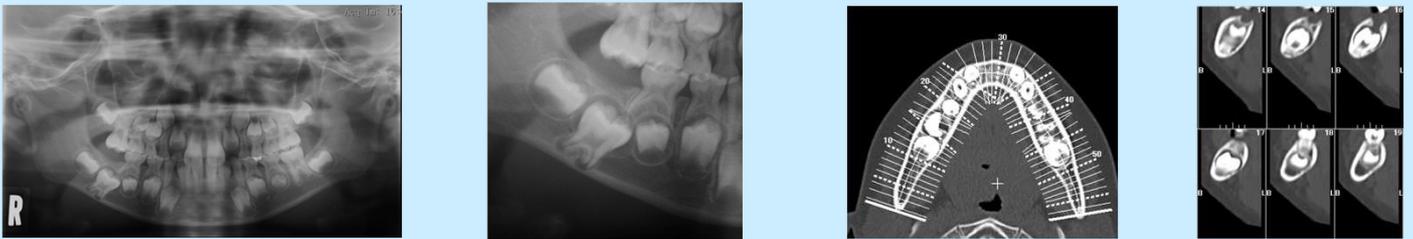
This case report describes the treatment of a patient with a deeply impacted mandibular first molar.

Case

A 7- year- old Japanese boy first presented to the Tanaka Dental Clinic.

The chief complaint was unerupted mandibular right first molar.

He had no significant medical and family history.



Radiographs showed that the crown of the mandibular right first molar was located immediately underneath the apex of the second primary molar. CT findings showed no malposition buccolingually.

Figure 1. Initial radiographic aspect

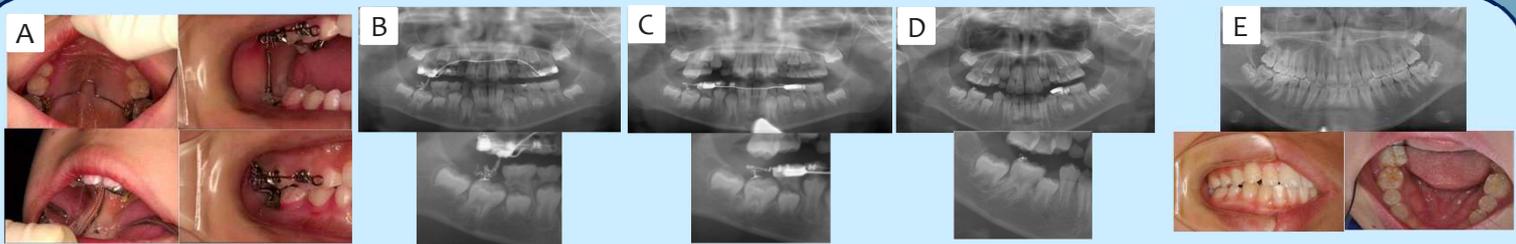
Treatment



Treatment planning : Surgically exposed and Traction

Impacted first molar was surgically exposed and an orthodontic bracket with a ligature wire was placed on the impacted first molar

Figure 2. Surgically exposed



Anchorage for traction was placed on the maxillary molar (Fig.3-A). Traction force was performed by using a closed coil spring (Fig.3-A,B). Eight months after the start of traction, the anchorage point was changed to the mandibular second primary molar in order to move the tooth in a distal direction (Fig.3-C). The active treatment was completed in fifteen months (Fig.3-D). , after which the patient was observed until the second molar had erupted to complete the permanent dentition(Fig.3-E).

Figure 3. Traction methods and follow up

Comments

The first molar is extremely important for completing the occlusion of the permanent dentition. When it becomes impacted, not only a decline in masticatory function happens, but also inclination of the neighboring teeth and extrusion of the opposing tooth is observed, which adversely affect completion of a healthy permanent dentition.

Therefore, it is important to begin treatment of first molar impaction early in order to successfully obtain a normal permanent dentition.