

A Supernumerary Tooth Fused to a Maxillary Permanent Central Incisor

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Abstract

A case history of an anomaly of the dentition, a supernumerary fused to a central incisor, is presented. The treatment of the anomaly is described. The treatment involved many of the various disciplines of dentistry in order to retain the tooth, and achieve a good functional and esthetic result.

Introduction

Fusion, according to the classification of Wedl¹ and as supplemented by Busch,¹ is defined as the organic dentinal union of two or more individual teeth. Shafer, Hine, and Levy² report a hereditary tendency in some cases of fusion between a normal and a supernumerary tooth. In their opinion, two normally separated tooth germs fuse when some physical force or pressure causes contact between them. Spouge³ feels that the underlying cause resulting in fusion is unknown.

A Medlars search revealed no published case of treatment of a supernumerary fused to an incisor tooth prior to this paper. A case is presented demonstrating the maintenance of such an anomalous tooth in the dentition with a good esthetic result.

Report of a Case

A well-nourished, well-developed nine-year-old caucasian male presented to the Pedodontic Clinic at the University of Southern California School of Dentistry with a chief complaint of "I don't like my funny front tooth," (Figure 1 and Figure 2).

Oral examination revealed an Angle Class I cuspid and molar relationship with lower anterior crowding. There were carious lesions present in the primary and



Figure 1. Labial view of Supernumerary fused to right central incisor.



Figure 2. Lingual mirror view of anomaly.

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permanent molars. The maxillary right permanent central incisor was fused to a supernumerary tooth. The rest of his oral tissues were within normal limits, his physical examination was unremarkable, and his past medical history was non-contributory.

Radiographic examination confirmed the diagnosis of a supernumerary tooth fused to a central incisor. From the radiographs it was not possible to determine if there was pulpal communication between the fused teeth.

In order to retain the vital incisor and remove the supernumerary from the labial of the incisor, it is necessary for each of the teeth to have its own root canal with no communication between them. To determine if two canals did exist, an endodontic procedure was performed on the supernumerary tooth. If there was a communication between the canals, the gutta percha or zoe sealer would appear radiographically in both canals. A radiograph of the completed endodontic procedure (Figure 3) shows no communication between the canals. The endodontic procedure was completed eighteen months following the initial examination.

The complete crown and a section of the root of the



Figure 3. Radiograph of completed endodontic procedure in Supernumerary root canal. Note no communication between root canals.

supernumerary tooth were removed to the level of the cemento-enamel junction of the intact incisor. This level was arrived at clinically so as not to destroy the labial plate of bone and not to produce too great a periodontal defect. The procedure was accomplished under local anesthesia using a long, thin diamond stone in a high speed handpiece with copious amounts of water. Healing occurred uneventfully.

One week following the surgical removal (19 months following initial examination), the maxillary right and left first molars, lateral incisors, and central incisors were banded and a twist-o-flex archwire was tied to the bands to begin rotating the right incisor (Figure 4). One month later the patient was examined and the tooth had rotated approximately 2mm. However, a 6mm. periodontal pocket still existed on the mesial aspect of the tooth.



Figure 4. Bands placed one week following removal of crown of the Supernumerary tooth.

Following consultation with the department of periodontics, the determination was made to perform subgingival curettage of the mesial pocket each time the patient was seen for an orthodontic adjustment. Seven months after the placement of the orthodontic bands, the tooth was almost in its normal position, but the periodontal pocket depth had increased to 9mm. All orthodontic bands were removed, and the defect on the labial of the incisor (where the supernumerary had been cut off) was repaired by etching the enamel with phosphoric acid (37%) and applying a composite resin (Adaptic) (Figure 5).

A Maxillary Hawley appliance with a finger spring lingual of the right central incisor was constructed to complete the alignment of the incisor. Subgingival curettage was continued at six-week intervals. Five months following the commencement of Hawley therapy the tooth was in a good position and the patient was placed on retention. At this time the periodontal

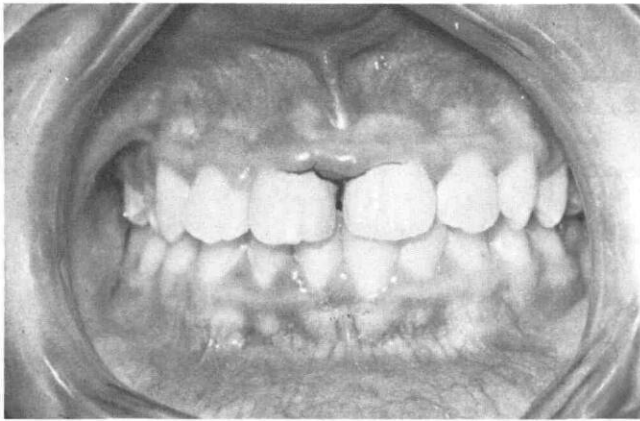


Figure 5. Orthodontic bands removed and enamel defect repaired.

pocket depth was 4mm. Six months later the patient returned for re-evaluation, and the Hawley retainer was discontinued. The pocket depth at this time was 3mm, with some hypertrophy of the labial and interproximal gingivae (Figure 6). The patient's oral hygiene was still very poor. No further follow-up was possible.

Discussion

Anomalies of the dentition present real challenges to the dental practitioner. A supernumerary tooth fused to a maxillary permanent central incisor has been presented to demonstrate clinical dentistry's ability to treat an anomaly and produce a good result. The treatment required endodontics, surgery, periodontics, operative dentistry, and orthodontics to achieve the desired result.

Conclusion

1. A supernumerary tooth fused to a maxillary permanent central incisor has been described.

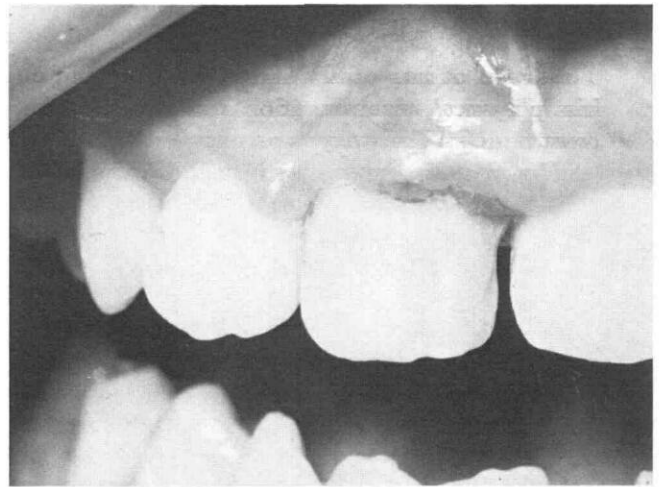


Figure 6. Gingival hypertrophy.

2. The treatment required a multi-disciplined approach.
3. The final result enabled a nine-year-old boy to maintain a full functional dentition with a nice esthetic smile.

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