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# TREATMENT OF A MAXILLARY LABIOVERSED CENTRAL INCISOR WITH ROOT DUPLICATION

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## AIM

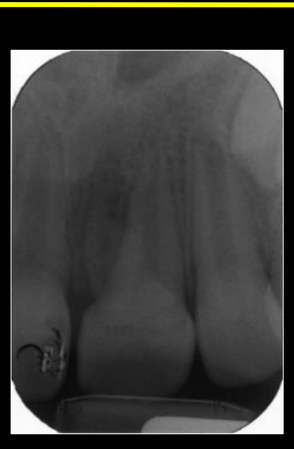
To discuss the treatment of a maxillary central incisor with root duplication and a labioversed crown after avulsion of the predecessor.

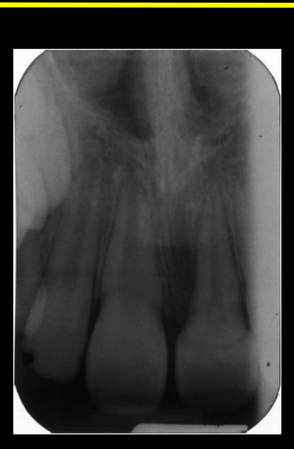
## ANAMNESIS

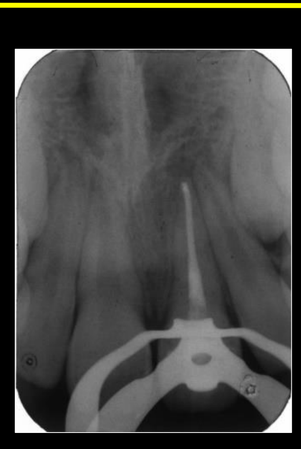
An 8-year old Caucasian girl was referred to our specialty clinic because of the labioversed position and enamel malformation of tooth 21 (Fig. 1). The dental anamnesis revealed that she had lost tooth 61 through avulsion at the age of 2.5. The X-ray (X-ray 1) showed an extra root projecting from an enamel tubercle at the buccogingival side of the crown. In consultation with the parents, it was decided to remove the extra root in order to facilitate the alignment of the tooth with the neighbouring teeth at a later stage.

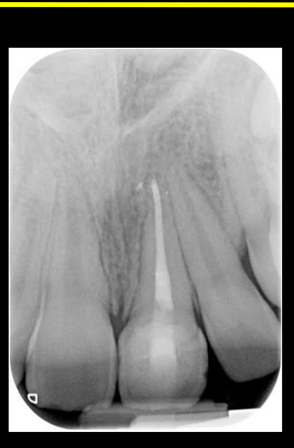
## PROCEDURE

Because of the young age of the patient, the surgery was performed under general anaesthesia. After local infiltration anaesthesia with vasoconstrictor a full thickness mucoperiosteal flap was raised and both roots were visualised (Fig.2). The supplementary root was removed from the main root with a bur (Fig. 3 & 4). Inflammation tissue around the extra root had resulted in loss of the buccal bone plate and was thoroughly removed (Fig. 5). Around the main root no inflammation tissue was present and a connection between both root canals could not be observed. After careful examination and rinsing of the surgical site, it was closed. Healing was uneventful and sutures were removed after one week.


X-ray 1


X-ray 2


X-ray 3


X-ray 4

## FOLLOW-UP

Two months later the tooth reacted vital to pulp tests (X-ray 2) and the enamel discoloration was masked by the referring dentist. Nevertheless 1 year after surgery the tooth became necrotic and root canal treatment was performed (X-ray 3). Apart from the necrosis, no other symptoms were present and the healing of the soft tissues and bone was excellent (Fig. 6). Also the position of the tooth spontaneously ameliorated. Two and a half years after surgery the situation was stable (X-ray 4 & Fig. 7) and the patient was referred for improvement of the composite restoration and for orthodontic advice to align the tooth as part of full mouth orthodontic therapy.

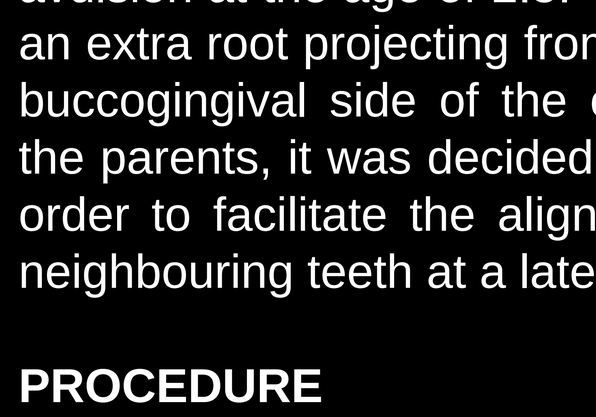


Fig. 1

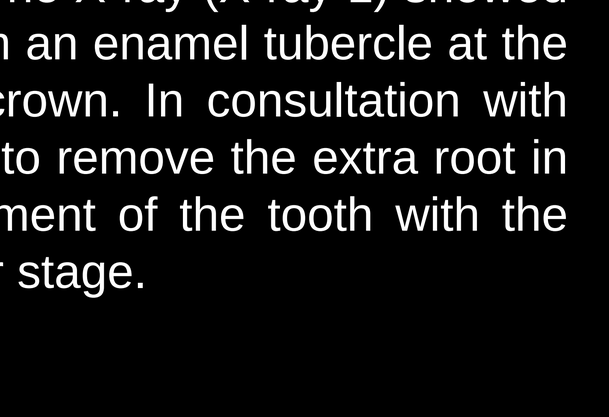


Fig. 2

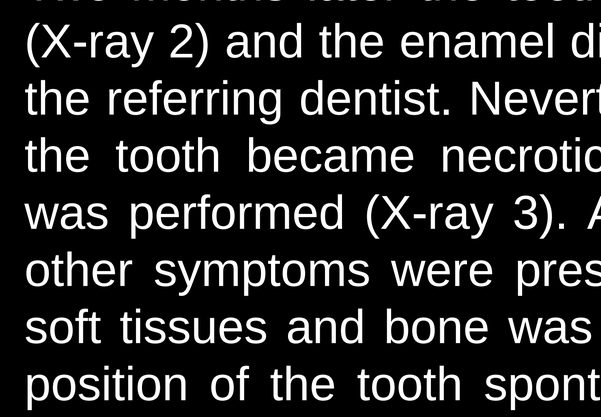


Fig. 3

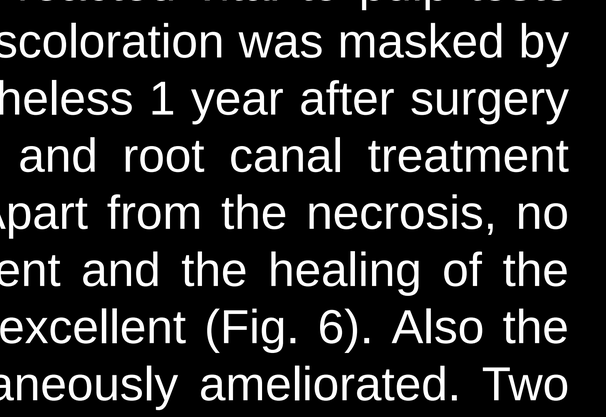


Fig. 4

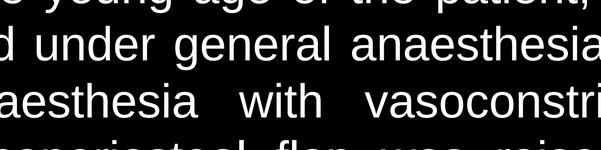


Fig. 5


Fig. 6

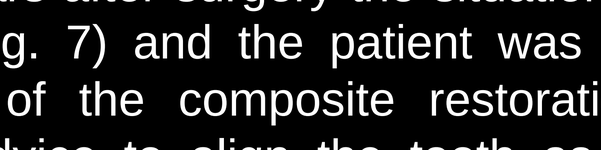


Fig. 7

## KEY LEARNING POINTS

- Trauma to a maxillary primary incisor may result in root duplication and malposition of the successor
- Removal of the extra root may be performed after full thickness flap elevation
- Vitality of the tooth needs to be monitored after removal of the extra root
- Maxillary incisors with root duplication do not necessarily need to be removed and can be maintained depending on the circumstances

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