To Replant or Not to Replant?

R. Brennan¹, K. FitzGerald¹

¹: Our Lady’s Children’s Hospital, Crumlin

Conclusion

• Child’s overall health is the overriding factor in decision-making
• This case demonstrates the complexity of treatment planning for children with CCCD
• Well-maintained oral health from an early age is important especially in CCCD

Background

• 3-year-old boy with a hypoplastic right ventricle and BT and Glenn shunts (complex congenital cardiac disease: CCCD)
• Dental Tx under GA needed in preparation for third major heart surgery
• High caries activity
• Infective endocarditis prophylaxis per AHA
• Extensive treatment plan including crowns, fillings, and multiple extractions

Case Report

• Buccal abscess tooth 85 → extraction
• Radiograph: clearly defined dental follicle of the developing 45 in furcation of 85
• 45 hypoplastic
• Drainage of pus after extraction of 85
• Follicle of 45 firmly attached to furcation of extracted 85
• The child’s mother was informed about the event
• Tissue to histopathology to confirm the clinical findings

Decision not to replant bud, based on:

• Site for replanting chronically infected → poor prognosis
• Early loss post-GA as no means to secure → aspiration risk
• Risk of medium/late infection → risk of infective endocarditis.
• Young age and poor cooperation → appropriate surveillance impossible
• Permanent successor hypoplastic
• Detaching the follicle from furcation 85 → further damage to 45
• Failure → likely repeat GA
• Favourable mesial drift of the 46 to fill space of absent 45 is to be expected

Discussion

• No similar previously published images or literature were found although a few²,³ have described accidental extraction and replantation of an immature permanent tooth not attached to the primary molar
• Exact process leading to attachment to the primary tooth unknown but likely to be infection-related⁴
• Unknown prevalence of similar incidents
• Unknown frequency of missed/unreported incidents

References

²William B. Kemp, Accidental extraction and replantation of an immature permanent tooth, Journal of Endodontics, June 1977, Vol 3
³Efrat et al., Dental Traumatology, Immediate repositioning of an accidentally extruded immature premolar after extraction of the root remnants of the primary molar, Dental Traumatology, Feb 2001, Vol 17
⁵Cardiac image above taken from www.chd-uk.co.uk

Hypoplastic right heart³

Preoperative radiograph

Immediately post-extraction

Discussion