

# To Replant or Not to Replant?

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## 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

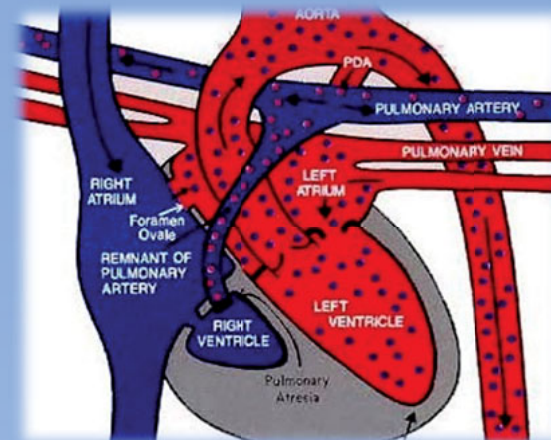
- Buccal abscess tooth 85 → extraction
- Radiograph: clearly defined dental follicle of the developing 45 in furcation of 85
- 45 hypoplastic
- Drainage of pus after extraction of 85
- Follicle of 45 firmly attached to furcation of extracted 85
- The child's mother was informed about the event
- Tissue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

## Decision not to replant bud, based on:

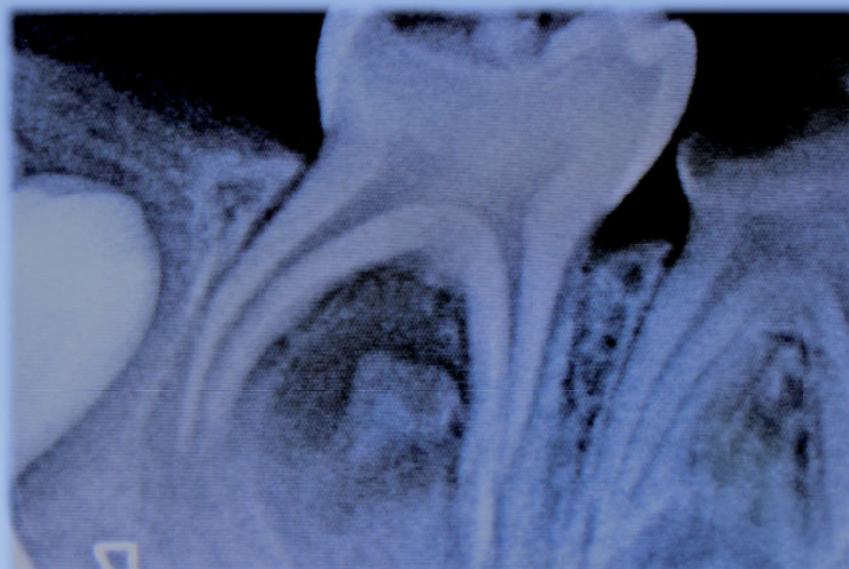
- Site for replanting chronically infected → poor prognosis
- Early loss post-GA as no means to secure → aspiration risk
- Risk of medium/late infection → risk of infective endocarditis.
- Young age and poor cooperation → appropriate surveillance impossible
- Permanent successor hypoplastic
- Detaching 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 few<sup>2,3</sup> 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-related<sup>4</sup>
- Unknown prevalence of similar incidents
- Unknown frequency of missed/unreported incidents



Hypoplastic right heart<sup>5</sup>



Preoperative radiograph



Immediately post-extraction

## 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

## References

- <sup>2</sup>William B. Kemp, Accidental extraction and replantation of an immature permanent tooth, Journal of Endodontics, June 1977, Vol 3
- <sup>3</sup>J. Efrat 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
- <sup>4</sup>Cordeiro MM, Rocha MJ, The effects of periradicular inflammation and infection on a primary tooth and permanent successor, J.Clin Ped.Dent 2005,
- <sup>5</sup>Cardiac image above taken from www.chd-uk.co.uk