RICHMOND
ENDODONTIC CENTRE

MRL ≠ VRF

SEP
2017

A Mid-Root Lesion (MRL) is oft associated with a vertical root fracture (VRF). Do not be too quick to condemn such teeth and reach for the forceps. Warning signs of a VRF for a tooth with a MRL are:

- A large post, especially if the radiolucency is centred over the end of the post
- A narrow probing defect greater than 4mm
- Overzealous canal preparation
- Canal transportation
- Class II mobility

The images on the right are of a 15 with a MRL and buccal sinus tract. This tooth does not exhibit any of the aforementioned VRF warning signs. One would need to be a balmy practitioner to recommend extraction without further investigation.

As with all sinus tracts, the source was confirmed by tracing it with a GP point in a Pre-Op PA. The canals of this 15 were not over-prepared. However, the obturation material does stop at the start of the curve in the root and the MRL is centred over that bend. This hints at the possibility of a mid-root perforation. A cynic may think such a perforation could be masked if the obturation was short and conservative. A pre-operative cone beam CT would allow a more detailed evaluation and possibly influence our recommendations. The patient decided to forgo the CBCT evaluation and proceed with non-surgical retreatment.

The canals were found to be a whopping 25mm long. It was technically challenging to remove the GP and gain patency whilst not transporting the canal or blocking oneself out. It took time and patience to attain a reliable glide path to working length. Fortunately, no mid-root perforation exists. At the end of the first appointment, I deliberately asserted pressure when delivering the Diapex. This was in the hope of discovering an accessory canal as the source for the MRL. No such culprit was identified yet this does not appear to have hampered our success. To help promote healing the buccal sinus tract was incised and drained. I was not overtly concerned about the large amount extruded Diapex in the MRL as it resorbs quickly and is not associated with post-op pain.

One month later, the 15 was asymptomatic and functional with no evidence of a sinus tract. We completed our treatment, without incident, and the referring dentist placed a permanent core the following week.

Eighteen months later a re-evaluation revealed significant resolution of the MRL. The 15 has remained asymptomatic and functional with no reoccurrence of a sinus tract. Despite an atypical pre-operative appearance this 15 has an excellent long-term prognosis.

MRL's are not synonymous with a poor prognosis. Please do not sentence these teeth to the dental dustbin without frank evidence of a fracture. A tooth with a MRL should be saved and can be with conservative endodontic treatment.

Regards,

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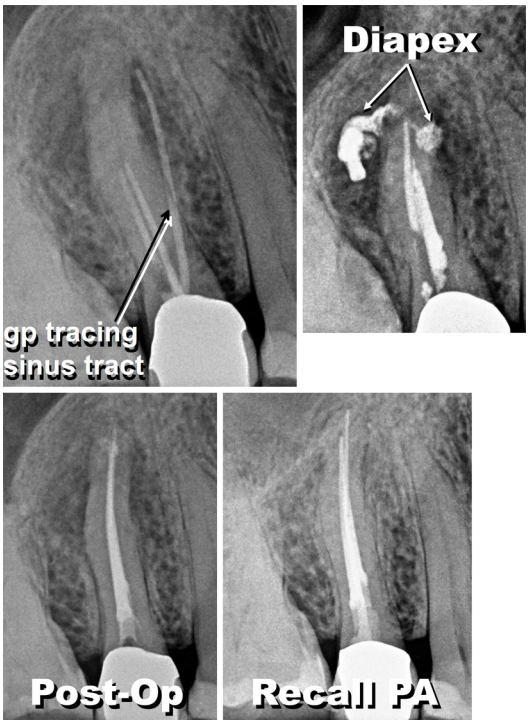

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Extended hours are also available

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