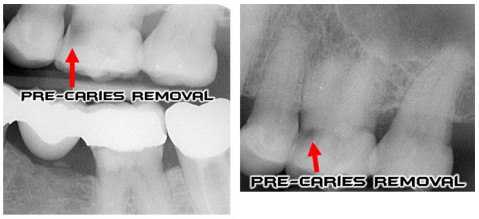
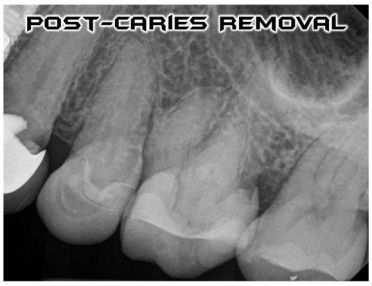
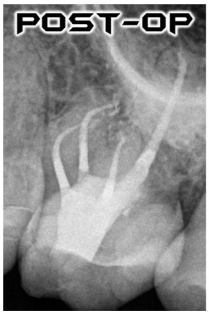
RICHMOND
ENDODONTIC CENTRE

# CUTTING CORNERS?

SEP
2020




The chamber and canals of this 26 are highly calcified, there is a large carious defect, and yet the tooth is asymptomatic. An accurate pre-op pulpal diagnosis is sacrosanct, yet practical achievement is très difficile because of the pronounced secondary and tertiary dentine. Such calcified teeth are prone to false-positive responses as it can be difficult to elicit a response to cold. False-negative responses are possible too. For instance, an overtly obliging individual may report a positive response to assuage a desire to be cooperative. It is also not uncommon for a patient to genuinely misinterpret other stimuli as an indication of the pulp sensing cold, such as:

- Lateral pressure of the cotton swab on a tooth
- The audible 'crackling' of the cold swab as it contacts a tooth
- A cold sensation from proximal soft tissues (i.e. tongue, cheek, or marginal gingiva)
- Visualisation of the 'dry ice' fog emerging from the mouth

Alternatively, one cannot discount the prospect of a decidedly enervated kind soul responding opportunistically to merely expedite the cessation of the grievous and rather impertinent tests. In summary, responses to pulp vitality tests are subjective. Be pragmatic, sceptical, and resist the disinclination to reconfirm responses. Otherwise, false positive and negative diagnoses will abound resulting in more frequent post-op complications and less successful outcomes.

Pre-operatively, the pulp was indeed vital. Rather than a healthy pulp, a diagnosis of asymptomatic irreversible pulpitis is worth considering for two reasons:

- The carious defect is large
- The healing potential of such a calcified chamber and canals is marginal

Symptomatic irreversible pulpitis developed after the caries removal and restoration. This patient was keen to avoid the dreaded 'root canal treatment' and commendations are due for the attempt to preserve the pulp. Nevertheless, two distinct challenges are now afoot, attaining adequate pulpal anaesthesia and gaining patency in the calcified canals. To ensure adequate pulpal anaesthesia, four PDL injections were provided after the typical local anaesthetic regimen and prior to access of the chamber.

Initial exploration of any of the four canals with a pre-curved 10/02 and 15/02 hand files failed to achieve patency. The sequential use of pre-curved 06, 08, and 10/02 files permitted an iatrogenic-free apical migration. The files were never pushed without a slight anti-clockwise turn. Files were quickly discarded to avoid breakage and other mishaps. More than a baker's dozen of files were sacrificed on the altar of patency attainment. After a 10/02 was able to easily slide to working length (WL), the small Wave One Gold file was used to complete the canal preparation. The M-Wire technology and reciprocating motion help allay concerns about file separation and transportation in such challenging canals. The Wave One file never made it to WL on the first attempt. After three pecking motions, of an amplitude of 2-3mm, the flutes were cleaned, the canal reirrigated, and the glide path confirmed with a 10/02. The buccal canals required about five 'laps' each with the Wave One whilst the palatal only required two.

Each canal was a challenge. Only after confirmation of the fit of the master GP cone would another canal be addressed. This pedantic instrumentation protocol is adopted when a 10/02 hand file cannot gain patency after a couple of minutes. The feedback small hand files provide will direct not only the choice of the mechanised file system but also the process by which it is used.

Modern endodontics is never about cutting corners. Do what is necessary to attain an accurate diagnosis and customise your treatment to the unique challenges each tooth poses.

Regards,

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