Endodontic Warm Vertical Obturation

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Endodontic Warm Vertical Obturation

(two components: apical down-pack followed by warm backfill – goal is a the creation of a ‘void less’ root-filling ending within 2mm of radiographic apex (Ng et al 2008))
Use the correct GP points for the correct system you are using
Obturation Unit
Ensure that your tapered GP points fit well within the root canals and have been apically gauged – the process can only work predictably if you have
What do we need to do prior to Obturation?

- We need to confirm the apical gauge.
- This involves using a hand K file passively (without any rotation) and working out what apical size fits tightly at the apical stop.
- It improves the apical fit of the point to optimise future seal and reduce the risk of creating overfill.
- This can be done ‘Early’ or ‘Late’.
Early apical gauge

- After use of Protaper S1, S2 & SXs use a suitable sized K file to find out which size fits at the ideal WL
- Gentle index finger push vertical pressure – no twisting / rotation
- Usual size to start: buccals of upper molars and mesials of lower molars start with #20. Pal and Distals: #30. Single rooted teeth #35
Late apical gauge

• After use of Protaper S1, S2 & SXs and 04 / 06 Profiles use a suitably sized K file to confirm whether the size of your chosen finishing file binds firmly at the apex

• Gentle index finger push vertical pressure – no twisting / rotation
Verification of GP point to gauge plastic Maillefer ruler
Verification with plastic Maillefer ruler – GP points vary massively – cut level with scalpel blade then you have a gauged point
Direct or Indirect Gauging of Final GP point
Master GP point try-in and radiograph

- Select master GP point that matches both your chosen apical gauge and taper
- Verify the apical size of the point using either an apical gauge ruler or a gutta-cutter
- Now the apical end of your chosen GP point matches that of your master K-File (gauging instrument)
Master GP point try-in and radiograph

• Seat GP point within the root canal and check length of seat matches with your chosen reference point
• In multi-rooted teeth consider cutting off the points level with the chosen reference points
• Posteriorly, I am happy to take off the rubber dam off quickly to record the LCPA radiograph – then straight back on with the RD
GP try-in
– digital sensor -
Problem with the plastic blocks and teeth

• They melt
• Use lots of glide
• Accept you will melt the blocks
• Accept that you will leave GP core behind- we will show you how to retrieve / remove it
Apical Obturation

- Confirm that heating tip and a Buchanan plugger can reach to within 5mm of WL
- Mark this length (WL minus 5mm) with a silicone stopper
- Coat the master cone apically with a thin layer of sealer and insert to WL
- Set heating tip to 200°C to burn off excess GP from orifice
- With heat ‘on’ push to stop in one slow movement, stop heat and maintain apical pressure for 10 seconds
Select a correct ‘sized’ and ‘tapered’ GP point
Work out which plugger can get down to within 4mm from apex
The Vertical Heated Down-pack

Practical & technical knowledge

www.hodsolthouseidental.co.uk
Apical Obturation – Continuous wave vertical condensation

• Confirm that chosen (normally size 8) heating tip and a Buchanan plugger can reach to within 5mm of WL

• Mark this length (WL minus 5mm) with a silicone stopper

• Coat the master cone apically with a thin layer of sealer and insert to WL

• Set heating tip to 200°C to burn off excess GP from orifice (horizontal)

• With heat ‘on’ push to stop in one slow movement, stop heat and maintain apical pressure for 10 seconds
Apical Obturation

• Activate heating tip to release plugger shearing off the apical portion
• Vertically condense the GP with Buchanan plugger to pack and condense the apical portion
• A radiograph can be taken to check density and position of apical GP
Apical Obturation – Schilder’s incremental vertical condensation

- Confirm that likely final heating tip (08) and a Buchanan plugger can reach to within 5mm of WL
- Mark this length (WL minus 5mm) with a silicone stopper
- Coat the master cone apically with a thin layer of sealer and insert to WL
- Start with tip of 12 and then move down sizes 10, 8 (&6) at 200°C until one tip gets to within 5mm of WL
- With last tip stop heat and maintain apical pressure for 10 seconds
Apical Obturation

• Activate heating tip to release plugger shearing off the apical portion
• Vertically condense the GP with Buchanan plugger to pack and condense the apical portion
• A radiograph can be taken to check density and position of apical GP
The Vertical Heated Down-pack and warm back-fill

Practical & technical knowledge
Practical & technical knowledge
Coronal backfill obturation

- Set the GP extruder to 200°C.
- Insert the needle to length, hold for 3 seconds and then express molten GP into the canal in increments of 3mm.
- Condense the GP with the cold Buchanan pluggers
- Repeat until 3mm short of canal orifice
Coronal backfill obturation

- Set the GP backfill extruder to 200°C.
- Insert the needle to length, hold for 3 seconds and then express molten GP into the canal in increments of 3mm.
- Condense the GP with the cold Buchanan pluggers
- Repeat until 3mm short of canal orifice
Practical & technical knowledge
Now please go and do it