Canal Preparation - Crown Down Technique

The crown down technique

Scout the canals and carry out coronal pre-flaring

Prepare coronal two-thirds

Establish the working length: this is 0.5-1mm short of apex locator zero reading or radiographic apex

Establish a 'glide path' - using a size 10K file

Canal preparation: Prepare the canal to 3 sizes larger than the first file which binds at the apex

Based on the rotary system selected, select file size to match the canal and prepare in brushing motion (away from the furcation) to WL. Use files in sequence

If there is an abscess, uncontrolled bleeding, or weeping canals, dress the canals with non-setting CaOH for 2- 4 weeks and review for cleaning and obturation. There is no significant difference in outcome between single vs multiple visit RCT.

68

Flood the coronal aspect with Sodium Hypochlorite first to eradicate the majority of the bacteria. Then, Introduce a pre-curved size 10 K file to gently negotiate canals and flare upwards and outwards using size 2 and 3 GG bur in coronal few millimetres only.

Using hand instruments, explore and negotiate the coronal two thirds and flush with NaOCI. Then, using hand or rotary NiTi files prepare and enlarge the coronal two thirds.

Apex locator tip: Only the zero reading is accurate. Radiograph tip: if the file is at the radiographic apex, reduce length of file by 0.5-1mm (to the apical constriction). Current evidence suggests that apex locators are more accurate than radiographs because the constriction can be up to 3mm from the terminus in 50-98% of roots.

This can be achieved by hand or rotary filing. This is the rotary technique. It is recommended to precurve a hand file initially and insert it using a watchwinding motion. A size 10 K file must be loose in the canal prior to introducing rotary instruments.

Do not place any pressure on the file. Canals should be irrigated copiously throughout filing with recapitulation and patency. Check the file after the apical preparation. If the file felt 'loose' in the canal, then go one size larger. If this is loose select one size larger again.

Advantages of coronal preparation first:

- 1. Improves tactile sensation.
- 2. Prevents pushing bacteria from the infected coronal aspect further into the canal, reducing the incidence of flare-ups.
- 3. Allows more accurate working length determination.