

There are many techniques for removing plastic carriers. Most of them rely on two key features: the apical half is not jammed tightly in the canal and there is enough of the carrier extending out of the orifice to bind to, grasp, lever coronally, etc... If the manufacturer's guidelines are followed the carrier will not be cold-welded to a wall but there will be no portion of the carrier extending beyond the orifice. Not to worry, as long as the carrier is not bound apically it is possible to remove it.

The challenges facing this 36 were thoroughly discussed and the patient confirmed he preferred to proceed with retreatment even if surgery may still be necessary in the future. The access preparation needs to be a little larger than normal in order to permit better visualization of the core. If a sliver of a carrier is spotted in the core it is preserved in the hope it may prove useful for pulling the rest of the carrier out later. To pull on a carrier early during the retreatment process is to break it. The carriers in this case, had the effrontery to effectively be-one with the apical portion of the canals and not even a single bristle extended coronally from the orifices.

The isthmus between the buccal and lingual canals in both roots was troughed to a few millimetres below the chamber floor. No isthmus canals were discovered but the trough proved useful for gutta percha (GP) removal, loosening of the carrier, and apical migration in the canals.

With chloroform in the chamber a DG-16 was used to perforate and remove the GP encircling a carrier. Next a heated tip (i.e. HotShot) is placed beside the carrier and advanced apically. The combination of heat and chloroform efficiently softens the GP. When the HotTip is removed a 15/02 hand file is inserted into the same spot pronto. The hand file will advance apically like a hot knife through butter. This is repeated several times alternating between two sides of the carrier (never the furcal aspect). If a hand file extends apical to the tip of the carrier the prospect of removing the carrier and gaining patency will improve exponentially.

That was not the case for this 36. Apically there was no GP, only a plastic rod tightly packed into each canal. This is analogous to attempting to remove/by-pass a separated instrument. Fortunately the carrier is plastic and it is possible, though not easy, to 'work through' the carrier and follow the original canal path. Too much apical pressure will transport the file away from the original canal path whilst too little force will not allow the hand file to tear, shear, or budge past the plastic obstacle.

No small bevy of No. 10 and 15 hand files and one thumb were sacrificed in my efforts to gain patency in these four canals. It took approximately forty minutes per canal to complete the treatment. The vast majority of time was dedicated to negotiating the last four millimetres of each canal. The MB canal proved particularly challenging as the carrier was practically at the apical constriction. Not every person can endure such a marathon appointment but this fellow was well informed, highly motivated, and marvellously relaxed for the entire appointment.

Some on this continent of ours call the 36, tooth number 19. It turns out I started 2019 with a corker of a 19. I will truly have a happy year if this 19 does not require surgery in '19. Naysayers may proclaim I should have stuck to my guns and insisted surgery as the only viable option for this 19 in 2019 but hindsight is 2020.

Regards,



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