

COLLATED Q&A QUESTIONS – PROF PATRICK TSENG

POST REMOVAL

1. **What is your recommended ultrasonic power setting for endodontic post removal and separated instrument removal?** I usually use at maximum power for post removal and 50% for separated instruments.
2. **What is your opinion on using silicone/corn oil to lubricate the ultrasonic movement to remove the instrument as suggested by Dr Terauchi?** Interesting but never tried it.
3. **What are your recommended protocols for removing fiber posts or posts cemented with resin cements?** Afraid we need to trephine around the post and then use ultrasonics to loosen them. For resin posts, no choice but to use a high-speed drill to drill through them starting at the safest point which is at the centre of the post.

CALCIFIED/BLOCKED CANALS

1. **If we are short of the apex (took a CBCT and cannot see a canal opening past my GP), what's the max length we can accept for a tooth which: 1) HAS NO PARL To leave and monitor. 2) IRREVERSIBLE PULPITIS WITHOUT PARL? Even better to leave and monitor. How do we know when to refer if we can't get to length? If on radiograph, you see canal space beyond your maximum negotiable length.**
2. **In cases where the blocked canal is due to packing of dentine debris, what tips do you have to negotiate it? Do you use glyde? Yes, fine, stiff files and lots of lubrication containing EDTA.**

RETREATMENT, APICAL SURGERY

1. **Will extruded GP cause a foreign body reaction and subsequently a PA lesion? Not seen but in persistent long-standing infections can turn 'cystic'. Hence, could this be a cause of a non-healing PA lesion (assuming the root fill is good?) No, unlikely. In such a case, should retreatment be done? we should review the cause of the persistent lesion. It is most likely reinfection or a radicular cyst if it persists and not the extruded GP.**
 - a) **Addition: How about another scenario where there is "extruded" GP due to presence of external root resorption? No issue if the canal has been adequately disinfected and sealed.**
 - b) **Will there be any difference in treatment approach if there is a periapical radiolucency vs if there is no periapical radiolucency? No. Will depend on if the lesion is expanding, remains same or reducing in size and whether there are symptoms or no symptoms.**

2. **If the patient has persistent tenderness after initial root canal treatment and re-root canal treatment (done in a short space of time - 1 month), how would you treat the case?** Exclude other causes of persistent tenderness eg occlusal/incisal interference on excursion, muscular, non-odontogenic, cemental tear due trauma before we explore surgically for vertical/horizontal fractures.
3. **Referring to the first few slides where you're treated the teeth, at which point do you decide that a apical resection surgery is needed instead of a retreatment?** If tooth has been asymptomatic, a repeat radiograph is taken in 3 and 6 months. If lesion is reducing in size or remains the same, to leave it. If increasing in size and symptomatic, then discuss surgical retreatment.
 - a) **Also, how Long do you monitor before diagnosing it as radicular cyst which requires some enucleation rather than a root treatment alone.** Almost immediately. A radicular cyst will continue to 'weep' into the canal despite cleaning and shaping. At the 2nd visit, we should be able to tell if the canal is 'wet' and contaminated and a surgical approach should be recommended.
4. **For missed canals, will a CBCT help to diagnose or locate any canals which we may not be able to pick up from an OPG?** Yes, CBCTs will be useful to locate missed or additional canals not picked up by an OPG or PA.

MEDICO-LEGAL ISSUES

1. **What should we tell patients who ask if asymptomatic PA lesions will be problematic? Other than telling them that a lot depends on the individual case, are there any *statistics* we could give them to help them with their decision making?** Afraid not. I usually advise them that we will manage them when the time comes.
 - a) **Also, when do we treat asymptomatic PA lesions? Does size matter? Does enlargement in size matter?** Yes, we should investigate and manage if lesion is increasing in size. We can continue to monitor if asymptomatic and size remains the same.
2. **If we wait and monitor, what will happen if patient intends to go overseas & is concerned about tooth becoming symptomatic suddenly?** Bring along antibiotics and painkillers. Pain will not be intense (like acute pulpitis) and to review upon return.
3. **Cases you have mentioned that monitor that are non- ideal but was assessed decision by endodontist. Will the same yard stick be given for GP?** Yes, there cannot be 2 'standards' of care.
4. **How do you tell/explain to a patient why the instrument separated?** Difficult tooth, angle of access, extremely acute curvature of canal, anatomical.

5. **The standard of care for root canal treatment by endodontist is the use of microscope. If a GP does root canal treatment without microscope, is it not standard of care? If it's a simple, standard canal configuration, microscope will not be essential Will a GP get in trouble for a failed Root canal treatment in medicolegal wise? In more complex cases, microscopes are the standard of care and best to refer (which is the standard of care).**

CRACKED TOOTH

1. **Would you recommend having an endo consult/assessment prior to crowning of a cracked tooth, in case the crack is deep but not detected? Suspected cracked teeth should be tested using standard tests for cracked teeth. If positive and don't show signs of irreversible pulpitis, they should be banded, observed, long term provisional crown and finally crowned if there are no symptoms. If any develop in the interim, then RCT is initiated.**
 - a) **How does the endo assess or prognosticate the tooth when no elective RCT is required (as in the case of a normal pulp)? See above.**
2. **What is the typical pain profile for a cracked tooth, apart from pain on release? History of sudden trauma, increasing sensitivity, sensitive on biting only at certain points or angles.**
 - a) **How about when the tooth is necrotic? No sensitivity, only tender on biting**
3. **How do you manage a cracked tooth that is still tender after RCT? Relieve occlusion and re-assess extent of crack if it has propagated into the root. Extraction if still symptomatic.**
4. **What is the incidence of a vital tooth becoming pulpitic after crowning? Depends on age and history of tooth, extent of caries, depth of crown prep, proximity to pulp.**

OTHER TECHNICAL ISSUES

1. **What are your thoughts on bacterial load testing prior to root fill? Not useful.**
2. **At what stage of impossibility of satisfactory completion of endodontic treatment would you recommend removal of tooth? Only if tooth becomes symptomatic, otherwise to leave for as long as.**
3. **What does it mean when the tooth does not have any pain immediately after obturation, but after 2 weeks the patient feels some slight sensitivity/sensation in the tooth? Sounds like a root fracture or sudden traumatic occlusion.**

4. **Prof, you mentioned about cemental tear being one of the less common cause of persistent tenderness post RCT and even re-RCT. Could you repeat how should we manage such cases?** non-surgical scaling and root planing of the pocket, surgical debridement with apical/ periodontal surgery, surgical debridement combined with guided tissue regeneration (GTR) and bone graft, or extraction.
5. **What are your thoughts on crown down vs step back techniques?** Numerous advantages of crown down versus step back but for anterior teeth with large canals, I still use the step back technique.
6. **How do we remove a short piece of broken GP right at the apex without pushing it through the apex? (eg. when removing a poor mid-fill, and a piece breaks)** Soften with chloroform and use paper points to soak it out.
7. **Any particular brand of NiTi rotary files you prefer?** I use a combination in a hybrid technique. Come attend my hands-on course.
8. **For apex locators, do we ensure that the canal is completely dry before using them? or must the canal be wet?** Not necessary but I air dry the canal with a triple syringe before using the apex locator.
9. **What should we do if there is accidental extrusion of chloroform/ NaOCL into the periapical region?** Copious irrigation with saline or distilled water.
10. **Would you recommend ProTaper handfile for shaping anterior teeth?** No. Stainless steel K-files work the best.
11. **What is your final irrigation protocol/regime before obturation?** 17% EDTA for 1 min and then final flush of NaOCL, dry with paper points and obturate.
12. **What are your thoughts on the effectiveness of the single cone obturation technique? (eg. protaper universal rotatry files and its corresponding GP cone)** Still not convinced of adequate sealing ability of single cones.
13. **Since healing potential may vary from person to person, if a lesion is large and chronic for a Long time , do you still root fill in 2visits?** Yes, especially if there are no further signs and symptoms and canal is dry on entry on the 2nd visit.
14. **How often do we do recalls? When is a PA required?** PAs in 3 months, 6 months, 1 year.
15. **Management of hot tooth:**
 - a) **How?** Come for the course.
 - b) **Sometimes, after the 1st visit of pulp extirpation, the tooth becomes terrible in pain in the next few days, what will you do for this?** NSAIDs, Re-instrument to apex.

MATERIALS

1. **How about d-limonen solvent (in place of chloroform)? chloroform does causes difficulty in removing the remnants in canal. what's your irrigation protocol for this?** Not familiar with d-limonen. I use an ultrasonic size 15 K file to irrigate out the chloroform.
2. **Does mixing the calcium hydroxide dressing with LA solution affect its efficacy?** No. just as effective as mixing with water.
3. **Any thoughts about MTA as obturation material?** Very good, very expensive and very difficult to retreat. Only used in exceptional circumstances.
4. **Do you use pure calcium hydroxide? Are there alternatives?** No, I routinely use Pulpdent delivered in a syringe.
5. **What is your opinion on bio ceramic sealants which are very popular in the US?** As good as our standard sealers if used correctly.
6. **What are your thoughts on Biodentine for vital pulp therapy?** Useful and works as well as MTA.