



The next few newsletters will address pulp and periradicular diagnoses. I hope to breathe some life into these possibly dull topics. A healthy pulp is symptom-free and responds normally to vitality tests. What is a normal response? Can we expect the same response to cold from a wafer-thin twenty-something bleaching-fanatic aesthetic queen who reports 'cold hurts all my teeth all the time' as the chain-smoking sixty-plus 'I can remember when the Beatles first got big' chronic grinding behemoth masseters of a man who thinks 'night-guards are for sissies'? Perhaps not, normal is specific to each of us. One would expect every tooth to react quickly and vigorously to the slightest change in temperature for the young lady and almost no response to cold for any tooth still surviving in the cranium of the old fellow. However, healthy pulps are present in both cases.

If you cannot elicit a response to cold on any tooth then try fluffing-up the cotton swab before blasting it with refrigerant spray. A tight cotton swab only transmits a temperature of about 0°C while a fluffed-up swab is closer to -25°C. When it is really cold, you can hear it crackle as it cools the tooth. Failing that the electric pulp test (EPT) can confirm pulp vitality on otherwise unresponsive teeth. For heavily restored teeth, the bridging technique will be necessary to expose subgingival dentine for the EPT probe.

Why bother testing for normal pulp? By discovering what a typical healthy pulp is for a particular person one will be able to identify the outlier, the one tooth that responds differently. Often it is obvious, one tooth is hypersensitive to cold or not responsive at all. However, it can be subtle. For instance, a mouth full of heavily restored teeth may prove difficult to identify the one hypersensitive culprit as all the teeth typically under-respond to our tests, but not when the person drinks super-hot coffee or eats frozen yogurt. Pulp vitality testing is a learned skill, practice makes us better, no one is perfect, and sometimes the results are inconclusive. You are not a nincompoop for recommending a re-evaluation or a second opinion.

Also, gauging a normal response is important in cases of trauma. Comparing the results of initial pulp tests to future findings can lead to early identification of pulp necrosis. With diligence this could be discovered prior to discolouration or other signs or symptoms of a failed pulpal recovery.

Never assume a tooth with a radiographic lesion has a necrotic pulp. To not pulp test such a tooth is malpractice. Non-odontogenic sources for radiolucent lesions exist and pulp testing is absolutely necessary prior to performing endodontic treatment or extraction. The image above is of such a case. It was referred to me to 'do a RCT on 37'. The 37 has an odd radiolucent lesion associated with both its roots. However, the pulp responded normally to thermal tests and EPT. Confirming the true pulp status prevented a misdiagnosis, unnecessary RCT, and further delay in addressing the true pathology: keratocystic odontogenic tumour. As bad as the RCT on 36 looks it too was non-contributory to the lesion.

Many of us were taught to test the contra-lateral arch to help gauge what is normal. However, at times mild spontaneous pain or thermal sensitivity can be difficult for a patient to discern from the maxillary or mandibular teeth. Testing the ipsilateral arch is useful in ensuring there is no referred pain. For all but the centrals referred pain does not cross the midline.

The pulp may be normal but it is never dull and it is remiss of us to think otherwise.

Regards,



Joel N. Fransen  
BSc(OT), DMD, FRCD(C)  
Certified Specialist in Endodontics

> Richmond Endodontic Centre  
Dr. Joel N. Fransen

110-11300 No.5 Rd  
Richmond, BC V7A 5J7  
office@endodonticcentre.com  
T 604.274.3499  
F 604.274.3477

Office Hours  
8am to 5pm - Monday to Friday  
Extended hours are also available

The Richmond Endodontic Centre Boardroom is open; it is available for meetings, lectures, and study clubs. Please come by and have a look at our new presentation centre!