



THERMAL SENSITIVITY DURING THE HOLIDAY SEASON

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Occasionally a root-canal-treated tooth is reported to have thermal sensitivity. Don't worry the patient may not be crazy. After confirming the history of the problem, test the pulp and periradicular status of all of the teeth in the quadrant. Attempt to reproduce the chief complaint. If the tooth is sensitive to cold, test for cold; if it is sensitive to hot test for the response to heat. Next, assess the quality of the root canal treatment. Take different horizontal angulation radiographs to identify possible missed canals. If the obturation appears inadequate the likelihood of leakage is high. However, if the treatment appears adequate the likelihood of leakage is still significant. Do not rely too heavily on radiographic aesthetics when assessing the adequacy of root canal treated teeth. Cone beam CT evaluations are an excellent diagnostic adjunct. However, it is necessary to note both radiographs and CBCT's are great for finding imperfections but problem-free images do not guarantee of a lack of microscopic imperfections.

Possible causes for thermal sensitivity of endodontically treated teeth include:

- Missed canal(s) or inadequate cleaning, shaping, and obturation
- Silver cones, separated instruments, metal posts, or metallic carriers extending beyond the apex
- Defective coronal restorations (i.e. coronal leakage)
- Referred pain from paranasal tissue or another tooth with inflamed pulp (i.e. habit reference pain)
- Other non-odontogenic causes

What should you do if you have ruled out all of the factors listed above? It is prudent to seek a second opinion by an endodontist. It is possible for thermal sensitivity to exist in treated teeth where there is radiographic evidence of healing. Retreatment or microsurgery may be necessary to resolve the thermal sensitivity for cases that appear to have had excellent treatment and radiographic evidence of healing.

Why does this happen? Chronic inflammation with resultant neurogenic inflammation and/or a neuroma are the likely culprits. Periradicular regions of chronic inflammation are associated with an increased proliferation of nerves with a lower threshold of activation. In other words, the periapical region can have a greater concentration of nerve endings that are hypersensitive. The solution to the problem is to eliminate the stimulus which is often achieved via orthograde retreatment or microsurgery.

Vertical root fractures are not associated with thermal sensitivity in root canal treated teeth. Thus, extraction is likely an aggressive and erroneous treatment option. In the spirit of the season of giving, give the thermal sensitive root canal treated teeth a chance and save them!

Regards,

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WISHING
YOU

*Happy
Holidays!*
2012/2013



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Please contact our office if you would like the Richmond Endodontic Centre to provide emergency coverage over the Christmas Hols!