

Endodontic vs. Periodontal Lesions: Diagnosis and Treatment

The dental clinician is sometimes presented with a tooth that has a peri-radicular lucency which have endodontic and periodontal components. There are specific diagnostic examinations necessary to distinguish between an endodontic and a periodontal infection. Some Endo-Perio infections are primarily endodontic and secondarily periodontal in nature. Others may be primarily periodontal and secondarily endodontic in origin. Finally, there is a subset of lesions that are true endodontic/periodontal lesions.

One of the primary facts that need to be established in distinguishing endo/perio lesions is the pulp status of the subject tooth. If the pulp is determined to be vital, then the tooth likely has a periodontal infection. If on the other hand, the pulp status has been determined to be non-vital (necrotic or abscessed), then the tooth likely has an endodontic infection. Another crucial measurement in determining whether a tooth has an endodontic or periodontal infection is periodontal probing depths around the tooth. Periodontal infections have periodontal pockets that are wide, whereas endodontic infections have either no deep periodontal pockets or narrow periodontal defects. It is important to note that a deep, narrow peri-

odontal pocket which present as a J-type radiographic lucency (as opposed to circular shaped periapical lesions) may be indicative of a vertical root fracture (VRF).



1) Pre Op PA Radiograph
Note Large PAL & Extensive Bone Loss

In the case presented above, (radiograph #1) the patient had been advised to have the tooth extracted and an implant placed. Since the patient preferred to save the tooth if possible, he sought a consultation at our office. During the endodontic evaluation, a large distal lesion enveloping the distal root and the furcation area was noted. The tooth had a large composite restoration. Periodontal probing depths were up to 14mm on the buccal, distal and lingual, consistent with the radiographic presentation. There did not appear to be any pulpal response to temperature testing nor to electrical pulpal testing (EPT). The decision was made to treat the tooth endodontically, and re-evaluate for the need for periodontal treatment at such



2) Post Op PA Radiograph
3 MO post initiation of RCT

time (radiograph #2). The last radiograph (radiograph #3) shows extensive osseous healing in both the furcation as well as the distal area.



3) 2 Year Recall PA Radiograph
Tooth restored with P&C, Crown
Note Osseous Healing

As is the case with any treatment, the decision to treat a tooth endodontically, or periodontally should be based on a foundation of sound diagnosis. Diagnostic radiographs, diagnostic clinical examination as well as a thorough dental history are paramount in reaching a correct diagnosis. After all, a treatment can only be as good as the diagnosis.



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Dr. Odabashian has been practicing dentistry for 20 years, the last ten years as an endodontist. He is active in teaching (part time lecturer at LLU, Department of Graduate Endodontics); organized dentistry (Dr. Odabashian is a member of many professional associations, and serves on several standing committees including the AAE, CSAE, IAE, ADA, SFVDS). Dr. Odabashian serves on the CDA Peer Review Committee and is an expert witness in Endodontics for the State of California. He is married to Lilit and has three children, Galia, Se'rg'e and Noah.



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