**Critically Appraised Topic (CAT)**

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| **Project Team:**  |
| **10-4A** |
| **Project Team Participants:**  |
| **Theresa Ellner, Jeffrey Schootman, Kristen Wu, Sarah Salcedo** |
| **Clinical Question:** |
| **What is the survivability of a perio-endo lesion?** |
| **PICO Format:** |
| **P:** |
| **Individuals with a perio-endo lesion** |
| **I:** |
| **Endodontic therapy followed by periodontal therapy** |
| **C:** |
| **Endodontic therapy alone** |
| **O:** |
| **Survivability of the affected tooth** |
| **PICO Formatted Question:** |
| Among individuals with a perioendo lesion that receive endodontic therapy followed by periodontal therapy, compared to endodontic therapy alone, what is the survivability of the affected tooth? |
| **Clinical Bottom Line:** |
| **Perio-endo lesions are complex and require multiple stages of intervention. In practice, nearly all lesions must be treated with endodontic therapy followed by surgical or non-surgical periodontal therapy. Some research suggests that treating the underlying cause of the lesion may result in resolution, but it may be difficult to determine the etiology of a common perio-endo lesion.**  |
| **Date(s) of Search:**  |
| **November 1, 2020** |
| **Database(s) Used:** |
| **Pubmed** |
| **Search Strategy/Keywords:** |
| **Endodontal lesion AND Periodonal lesion AND treatment** |
| **MESH terms used:** |
| **Periodontal, endodonal, lesions, treatment** |
| **Article(s) Cited:** |
| **Endo-Perio Dilemma: A brief review** |
| **Study Design(s):** |
| **Organizational guidelines** |
| **Reason for Article Selection:** |
| **Relevant and high level of significance** |
| **Article(s) Synopsis:** |
| **This article is a clinical guideline from the Dental Research Journal. It discusses the different types of perio-endo lesions. The 3 major types are primary endo, primary perio, and true-combined. True combined lesions appear to be the most difficult and least predictable to treat.** **“Invasive perio procedures should be avoided [in primary endo lesions].”****In a primary perio lesions, the article indicates that perio treatment alone may be enough. It is possible, however, that endodontic therapy will be required.****In a true combined lesion, it is required to treat both the endodontal and periodontal lesion** |
| **Levels of Evidence:** (For Therapy/Prevention, Etiology/Harm) See <http://www.cebm.net/index.aspx?o=1025>[x]  **1a** – Clinical Practice Guideline, Meta-Analysis, Systematic Review of Randomized Control Trials (RCTs)[ ]  **1b** – Individual RCT[ ]  **2a** – Systematic Review of Cohort Studies[ ]  **2b** – Individual Cohort Study[ ]  **3** – Cross-sectional Studies, Ecologic Studies, “Outcomes” Research[ ]  **4a** – Systematic Review of Case Control Studies[ ]  **4b** – Individual Case Control Study[ ]  **5** – Case Series, Case Reports[ ]  **6** – Expert Opinion without explicit critical appraisal, Narrative Review[ ]  **7** – Animal Research[ ]  **8** – In Vitro Research |
| **Strength of Recommendation Taxonomy (SORT) For Guidelines and Systematic Reviews**See article **J Evid Base Dent Pract 2007;147-150**[x]  **A** – Consistent, good quality patient oriented evidence[ ]  **B** – Inconsistent or limited quality patient oriented evidence[ ]  **C** – Consensus, disease oriented evidence, usual practice, expert opinion, or case series for studies of diagnosis, treatment, prevention, or screening |
| **Conclusion(s):** |
| **Perio-endo lesions are a complex problem that requires solving. Theoretically, the lesions may be resolved by treating the underlying cause (deep pocketing, PARL, etc.) according to the article by Singh. In practice, however, lesion cause is rarely obvious. Due to this, treatment most often requires both endodontic as well as periodontal intervention. The order of the treatment is very important with root canal therapy preceding surgical or non-surgical periodontal therapy. Most cases of Perio-Endo lesions have a primary cause and a secondary result (e.g. PARL that casues attachment loss) and few lesions are true combined lesions with 2 primary causes occurring simultaneously. In any case, endodontic therapy should be completed before periodontal therapy for the more predictable outcome.**  |