

Endodontic Spotlight

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Introduction

Happy New Year! I hope you all had a wonderful holidays and a great start to 2013! In our first issue of the year we focus more closely on medically compromised patients. First, we have an analysis from a recent JADA that looks of the effect of dental care (not just endodontics) on patients after a recent heart attack or stroke. We then have two classic articles that study the effect of diabetes and smoking on endodontic care. Lastly, I have included an interesting new article on topical anesthetic.

Skaar D, O'Connor H, Lunos S, Luepker R, Michalowicz BS. Dental procedures and risk of experiencing a second vascular event in a Medicare population. J Amer Dent Assoc 2012;143:1190-8.

This retrospective study examined whether dental care increased the risk of a second ischemic vascular event. Using data from 50,329 individuals in the Medicare Current Beneficiary Survey (MCBS) from 1998 to 2007, they found 2,035 patients had a vascular event and 445 of these had a second event. Vascular events included acute myocardial infarctions, ischemic strokes, and transient ischemic attacks. Dental procedures were subclassified as invasive (including teeth cleanings, extractions and endodontic procedures due to the fact that they are associated with bacteremias) and noninvasive. They then evaluated if dental procedures 30, 60, 90, or 180 days after the first vascular event as associated with a second event. They found that dental procedures (either invasive alone or all procedures) were not associated with a higher risk of a second vascular event for any time period studied. In fact, in most cases the risk of second event showed a statistically nonsignificant decrease after an invasive dental procedure. Thus, dental care appears to be safe just 30 days after an ischemic vascular event, and the traditional recommendation of delaying care 6 months should be reassessed. That being said, if I personally see the need to perform care before the 6 month mark, I would definitely consider consulting with the patient's physician. *SUMMARY: Based on a retrospective study of 50,329 patients of which 2,035 had an ischemic vascular event, the authors found that dental care between 30 and 180 days after the first vascular event did not increase the risk of a second event.*

Fouad AF, Burleson J. The effect of diabetes mellitus on endodontic treatment outcome: Data from an electronic patient record. J Amer Dent Assoc 2003;134:43-51.

This retrospective electronic chart review evaluated the effect of diabetes on numerous endodontic considerations. 5,494 endodontic cases were reviewed, of which 284 patients had diabetes. The most important findings include: Patients with diabetes had increased periodontal disease of their endodontically treated tooth compared to normal (non-diabetic) patients. Diabetic patients had a decreased success rate for teeth with preoperative periapical radiolucenies compared to normal patients. There was also a trend towards an increase in preoperative pain and an increase in postoperative flare ups. *SUMMARY: The diabetic status of patients should be considered during endodontic treatment.*

Krall EA, Sosa CA, Garcia C, Nunn ME, Caplan DJ, Garcia RI. Cigarette smoking increases the risk of root canal treatment. J Dent Res 2006;85:313-7.

This prospective study followed patients to assess the effect of smoking on the risk of needing root canal therapy. 811 male patients in the VA Dental Longitudinal Study were followed for 2 to 28 years. The authors tracked whether the patients were smoking as well as if root canal therapy was performed. They found that cigarette smokers were 1.7 times more likely to have root canal therapy than patients who had never smoked. The risk for needing root canal therapy increased for patients who had smoked for longer periods of time, and decreased after the patient quit smoking. Patients who had quit more than 9 year previously had a similar risk as never smokers. Thus, smoking increases the risk of root canal therapy in a dose dependent manner. *SUMMARY: Smoking increases the risk of root canal therapy.*

Parirokh M, Sadeghi AS, Nakhaee N, Pardakhty A, Abbott PV, Yosefi MH. Effect of topical anesthesia on pain during infiltration injection and success of anesthesia for maxillary central incisors. J Endod 2012;38:1553-6.

This crossover double blinded clinical trial evaluated the effect of topical anesthesia on pain during local anesthetic injections. 25 volunteers received topical anesthetic or a placebo for one minute before an injection of one carpule of 3% prilocaine over the maxillary central incisor. The volunteers rated their level of pain during needle penetration and during anesthetic solution injection. An electronic pulp tester was then used to evaluate the efficacy of the anesthesia. The study was repeated two week later using the other topical gel (with anesthetic or placebo). The authors found that topical anesthetic did not affect the level of pain experienced during the injection. Additionally, they also noted that the success of anesthesia was not affected by the amount of pain experienced during the injection. Although this study demonstrates that topical anesthetic is not necessary, I personally plan on continuing to use it as doing so not only has a placebo effect but also helps demonstrates to the patient that I care that they are comfortable. *SUMMARY: Topical anesthetic does not reduce pain during local anesthesia.*

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