

Coronal Microleakage: An Online Study Guide

Abstract

The Editorial Board of the *Journal of Endodontics* has developed a literature-based study guide of topical areas related to endodontics. This study guide is intended to give the reader a focused review of the essential endodontic literature and does not cite all possible articles related to each topic. Although citing all articles would be comprehensive, it would defeat the idea of a study guide. This section will cover coronal microleakage (*J Endod* 2008;34:e135–e137)

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Introduction

The delivery of high quality clinical care requires a thorough understanding of the endodontic literature. The Editorial Board of the *Journal of Endodontics* (JOE) has developed this online study guide for endodontists and fellow clinicians interested in endodontics.

There are several potential applications for an online study guide. First, an online study guide permits clinicians to focus in on particular areas of endodontics where they can quickly review key papers devoted to one particular topic. For example, this particular study guide provides a summary of key papers in the area of coronal microleakage.

Second, a study guide permits speakers to efficiently review background material in preparation for future courses, lectures, or continuing educational events. Third, an online study guide permits students to review key papers in preparation for future examinations or for development of residency seminars. And, fourth, an online study guide permits readers to quickly and efficiently access either the abstract or the entire paper cited in the tables (see Discussion for details).

Methods

One potential problem in developing an online study guide was to provide a summary of major papers that contributed to a given topic area. The inclusion of all possible papers on a given topic would lead to an unwieldy collection that failed to clearly identify key papers in the area. Of course, the exclusion of key papers is also problematic. To address this issue, the JOE Editorial Board developed the overall list of topics to be covered and then for each topic generated an initial tabulation of key historical and contemporary papers on that topic. This list was then sent to two outside reviewers who were both experienced educators and Diplomates of the American Board of Endodontics. These reviewers then recommended additions and deletions of papers to the proposed topic list.

In order to maintain currency, the JOE Editorial Board proposes to periodically update each topical study guide using the same peer-reviewed process as described above.

Results

The results of the study guide (1-17) provide an overview of selected literature on coronal microleakage. This information is organized into Table 1.

Discussion

The journey to clinical excellence requires not only outstanding clinical skills but also that special knowledge that accrues from a study of the endodontic literature. The purpose of the JOE online study guide is to serve as one source for efficiently reviewing key papers that are organized by topic area and presented with the advantages of online Internet technology.

Although JOE readers are undoubtedly familiar with many aspects of the Internet, there are special features available at JOE online that provide particular advantages in their application for a study guide. For example, if this particular study guide is downloaded as a pdf, it provides a useful but static listing of the cited articles. On the other hand, if the reader navigates to the table of contents page for the online study guide and then clicks on "Full Text" (Fig. 1), they will be taken to an HTML version of the study guide. This online version of the study guide has special capabilities including the fact that the references are hyperlinked. Thus, the reader can quickly obtain abstracts of nearly all cited papers and can review the entire paper of many of the cited papers with only a few clicks of their mouse (Fig. 2). Thus, combining a study guide with online capabilities provides particular benefits for efficiently reviewing key papers in the endodontic literature.

We hope that this study guide will prove useful to you as one source for developing a focused and special base of endodontic knowledge. As always, we are interested in your thoughts on this initiative and how JOE can better serve you, our readers. Feel free to e-mail us at: JEndodontics@UTHSCSA.edu.

TABLE 1. Coronal Microleakage

Ref #	Title
1.	Swanson K, Madison S. An evaluation of coronal microleakage in endodontically treated teeth. Part I. Time periods. J Endod 1987;13:56–9.
2.	Madison S, Swanson K, Chiles SA. An evaluation of coronal microleakage in endodontically treated teeth. Part II. Sealer types. J Endod 1987;13:109–12.
3.	Madison S, Wilcox LR. An evaluation of coronal microleakage in endodontically treated teeth. Part III. In vivo study. J Endod 1988;14:455–8.
4.	Torabinejad M, Borasmy U, Kettering JD. In vitro bacterial penetration of coronally unsealed endodontically treated teeth. J Endod 1990;16:566–9.
5.	Kersten HW, Moorer WR. Particles and molecules in endodontic leakage. Int Endod J 1989;22:118–24.
6.	Magura ME, Kafrawy AH, Brown CE, Newton CW. Human saliva coronal microleakage in obturated root canals: an in vitro study. J Endod 1991;17:324–31.
7.	Khayat A, Lee SJ, Torabinejad M. Human saliva penetration of coronally unsealed obturated root canals. J Endod 1993;19:458–61.
8.	Guerra JA, Skribner JE, Lin LM. Influence of a base on coronal microleakage of post-prepared teeth. J Endod 1994; 20:589–91.
9.	Gish SP, Drake DR, Walton RE, Wilcox L. Coronal leakage: bacterial penetration through obturated canals following post preparation. J Am Dent Assoc 1994;125:1369–72.
10.	Trope M, Chow E, Nissan R. In vitro endotoxin penetration of coronally unsealed endodontically treated teeth. Endod Dent Traumatol 1995;11:90–4.
11.	Alves J, Walton RE, Drake D. Coronal leakage: endotoxin penetration from mixed bacterial communities through obturated, post-prepared root canals. J Endod 1998;24:587–91.
12.	Ricucci D, Grondahl K, Bergenholtz G. Periapical status of root-filled teeth exposed to the oral environment by loss of restoration or caries. Oral Surg Oral Med Oral Pathol Oral Radio Endod 2000;90:354–9.
13.	Ricucci D, Bergenholtz D. Bacterial status in root-filled teeth exposed to the oral environment by loss of restoration and fracture or caries—a histobacteriological study of treated cases. Int Endod J 2002;36:787–802.
14.	Shipper G, Orstavik D, Teixeira FB, Trope M. An evaluation of microbial leakage in roots filled with a thermoplastic synthetic polymer-based root canal filling material (Resilon). J Endod 2004;30:342–7.
15.	Tselnik M, Baumgartner JC, Marshall JG. Bacterial leakage with mineral trioxide aggregate or a resin-modified glass ionomer used as a coronal barrier. J Endod 2004;30:782–4.
16.	Yamauchi S, Shipper G, Buttke T, Yamauchi M, Trope M. Effect of orifice plugs on periapical inflammation in dogs. J Endod 2006;32:524–6.
17.	Fathi B, Bahcall J, Maki JS. An in vitro comparison of bacterial leakage of three common restorative materials used as an intracoronal barrier. J Endod 2007;33:872–4.

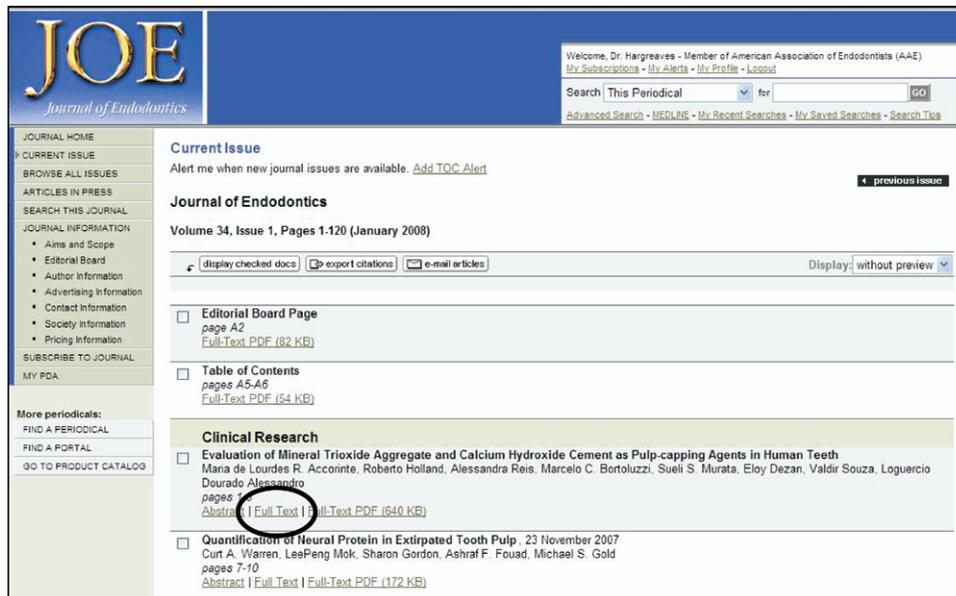


Figure 1. Navigation to HTML version.

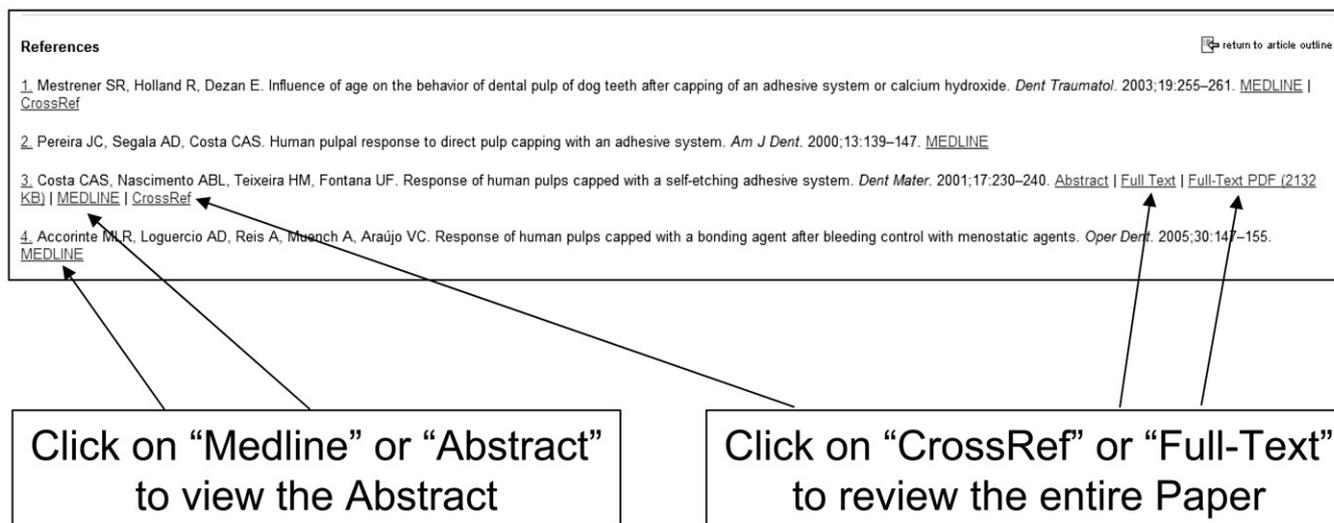


Figure 2. Hyperlink to References.

References

1. Swanson K, Madison S. An evaluation of coronal microleakage in endodontically treated teeth. Part I. Time periods. *J Endod* 1987;13:56–9.
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13. Ricucci D, Bergenholz D. Bacterial status in root-filled teeth exposed to the oral environment by loss of restoration and fracture or caries—a histobacteriological study of treated cases. *Int Endod J* 2002;36:787–802.
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