Abstract

Objectives
The purpose of this study was to determine the use of proprietary root canal sealers containing bioceramic materials in U.S. and Canadian dental schools having an undergraduate endodontic program.

Methods
All predoctoral endodontic program directors at U.S. and Canadian dental schools were sent an email inviting them to participate in a survey regarding the use of traditional and bioceramic containing root canal sealers in their predoctoral clinic.

For all participants, the survey asked the same initial "if/then" question: "Are you currently using bioceramic sealer in your predoctoral clinic setting?" If the participant answered yes, then they were directed to one set of questions (Fig 1). If the participant answered no, then they were directed to a different set of questions (Fig 2). No participant answered both sets of questions.

Questions allowed for one answer in a multiple-choice format, and some questions offered a write-in response. The final question was the same for all participants and provided for a free response answer to the question, "Is there anything else you would like to share regarding the use of bioceramic sealer in your predoctoral clinic?"

Introduction

Root canal sealers are a critical component of endodontic treatment. They fill the space between the root canal filling material and root canal wall.

The incorporation of bioceramic material into root canal sealers has received considerable attention in the past decade. Bioceramic sealers are reported to be biocompatible, nontoxic, non-shrinking, and able to create a bond between the root canal wall and filling materials. They also demonstrate favorable biologic properties and provide similar or better results than traditional sealers.

Discovering the incidence of use of these new proprietary root canal sealers among U.S. and Canadian dental schools having undergraduate endodontic programs will enable the dental profession to understand how well they have been accepted for routine clinical treatment.

Methods

1. When did you begin using a bioceramic sealer?
   a. Within the last 2 years
   b. 2-4 years ago
   c. More than 4 years ago

2. Which bioceramic sealer are you using?
   a. Bapler Endoease R5 BC Sealer
   b. Kindred Root RX
   c. Dental Crown Any Plus Bioceramic Sealer
   d. Other

3. Of the following, which is the most important reason for using bioceramic sealer in your undergraduate clinic?
   a. Studies based on biologic and physical-chemical properties
   b. Studies based on outcomes
   c. Ease of use via single cone technique
   d. Other

4. How are students placing the bioceramic sealer into the canal?
   a. Injection technique following the manufacturer’s instructions
   b. By coating files, paper points, and/or gutta percha cones
   c. Lateral condensation
   d. Other

5. Which obturation technique is being used with the bioceramic sealer?
   a. Single cone technique
   b. Lateral compaction
   c. Warm vertical compaction
   d. Carrier-based (GuidaCore)

6. Are you pleased with the bioceramic sealer thus far?
   a. Yes
   b. No
   c. Undecided

7. Bioceramic sealer is more expensive than traditional sealer, is it worth the extra cost?
   a. Yes
   b. No
   c. It has improved outcomes
   d. Both A and B
   e. No

8. Is there anything else you would like to share regarding the use of bioceramic sealer in your undergraduate clinic?

Discussion

The majority of bioceramic sealer users were pleased with the sealer thus far. Single cone technique was the most common obturation method used with bioceramic sealer. Use of bioceramic sealer with single cone technique may provide a simple obturation method with equivalent outcomes to traditional sealer and other obturation techniques. More research on long-term outcomes is warranted.

Conclusions

Bioceramic sealer use is increasing at U.S. and Canadian dental schools.