LETTERS TO THE EDITOR

Apical microleakage evaluation of system B and cold lateral compaction

Dear Editor,

This letter is in reference to the study by Farea, Masudi and Wan Bakar (1). In this study, the authors have used single rooted teeth with single canal to evaluate the apical leakage of teeth obturated using system B and cold lateral compaction technique. Intact single rooted teeth with single canal used for in vitro studies are usually premolars which are extracted for orthodontic reasons. It is common to find oval shaped canals in these teeth (2). The oval shape of these canals is shown to make shaping and cleaning difficult. It may be difficult to instrument the entire wall of oval canals using rotary endodontic instruments. The use of rotary nickel-titanium instruments in an oval canal tend to prepare a central circular bulge, with uninstrumented extensions buccally and lingually (3). These uninstrumented recesses that may remain after the preparation of these oval canals with rotary files should be obturated completely with gutta-percha and sealer to achieve a fluid tight seal (4). Study by Wu, Kast’aková and Wesselink (5) concluded that vertical compaction of warm gutta-percha achieves a better quality of obturation than cold lateral compaction of gutta-percha cones in oval canals. The reason for increase in leakage seen with cold lateral compaction might be due to the inadequate filling of the uninstrumented recesses left in oval canals (4).

Response to ‘Apical microleakage evaluation of system B and cold lateral compaction’

Dear Editor,

We are responding to the letter from Dr Manuel S. Thomas in reference to a recent publication ‘Apical microleakage evaluation of system B compared with cold lateral technique: in vitro study. Aust Endod J 2010; 36: 48–53.

We appreciate Dr Thomas’s comments and like to add the following comments.

In the first place the assumption was made that only bicuspids were used for this study. In Materials and methods it was stated that human teeth were used and indeed several of these were bicuspids. We do not disagree with the fact that because of the root canal anatomy these are more difficult to clean. However, all teeth were assigned at random to the experimental groups and the control groups. This was obviously done to remove any bias in sample selection.

Dr Thomas’s reference ‘Wu, Kast’aková and Wesselink (5) concluded that vertical compaction of warm gutta-percha achieves a better quality of obturation than cold lateral compaction of gutta-percha cones in oval canals’ supports his contention that the increase in leakage seen with cold lateral compaction might be due to the inadequate filling of the uninstrumented recesses left in oval canals.

References