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Endodontic treatment with MTA apical plugs: a case report.

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Abstract

Apexification with calcium hydroxide is associated with certain difficulties, such as the very long treatment time required, the possibility of tooth fracture, and incomplete calcification of the bridge. Use of an apical plug is an alternative treatment for open apices, and this has gained popularity in recent years, employing mineral trioxide aggregate (MTA) for optimal results. Here we report the successful treatment of two maxillary central incisors that had open apices and periapical lesions using MTA apical plugs after the root canals had been debrided and rinsed with 2.5% NaOCl. Calcium hydroxide paste was then placed in the canals for 1 week, before the apical portion of the canals (5 mm) was filled with the MTA plug. The remaining portion of the root canal was then sealed with a post and crown. After 6 months of follow-up, the clinical and radiographic appearance of the teeth showed a decrease of the periapical lesions. At 2 years, although the left post had been lost and the periapical lesion of the left central incisor had subsequently deteriorated, the right central incisor had healed successfully. Considering the importance of a coronal seal, the use of MTA for apical plugging appears to be a valid option.

Reaxys Database Information

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Indexed Keywords

EMTREE drug terms: aluminum derivative; calcium derivative; calcium hydroxide; mineral trioxide aggregate; oxide; root canal filling material; silicate; unclassified drug

EMTREE medical terms: adolescent; article; case report; drug combination; endodontics; growth, development and aging; human; incisor; male; methodology; tooth crown; tooth fracture; tooth periapical disease; tooth pulp disease; tooth root

MeSH: Adolescent; Aluminum Compounds; Calcium Compounds; Calcium Hydroxide; Dental Pulp Necrosis; Drug Combinations; Humans; Incisor; Male; Oxides; Periapical Periodontitis; Post and Core Technique; Root Canal Filling Materials; Root Canal Obturation; Silicates; Tooth Apex; Tooth Fractures
Medline is the source for the MeSH terms of this document.

Chemicals and CAS Registry Numbers: calcium hydroxide, 1305-62-0; oxide, 16833-27-5; silicate, 12627-13-3;Aluminum Compounds; Calcium Compounds; Calcium Hydroxide, 1305-62-0; Drug Combinations; Oxides; Root Canal Filling Materials; Silicates; mineral trioxide aggregate

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