FIRST INTERNATIONAL STUDENT CONGRESS DIGITAL VS ANALOGICAL IN DENTAL MEDICINE

University "Goce Delchev" - Faculty of Medical Sciences

MINERAL TRIOXIDE AGGREGATE MATERIAL USE IN DENTAL PATHOLOGY

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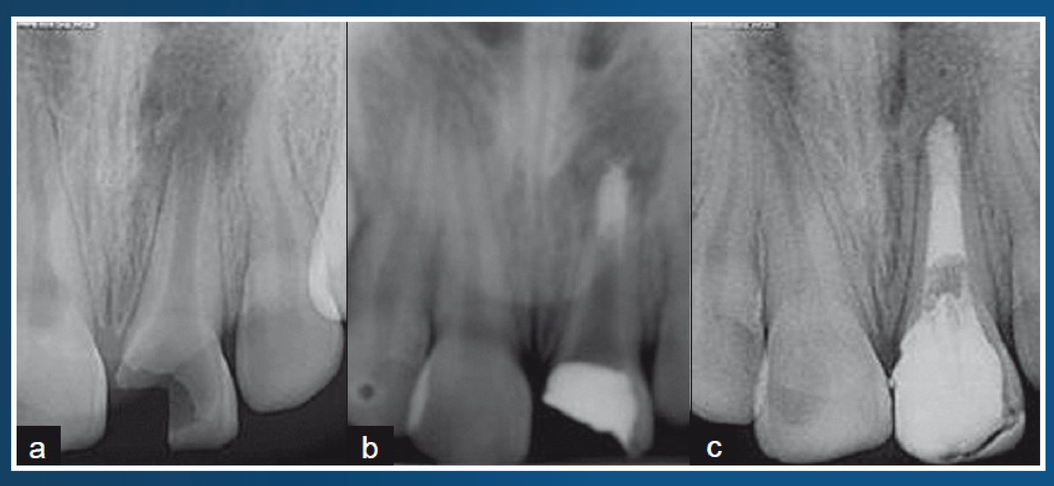
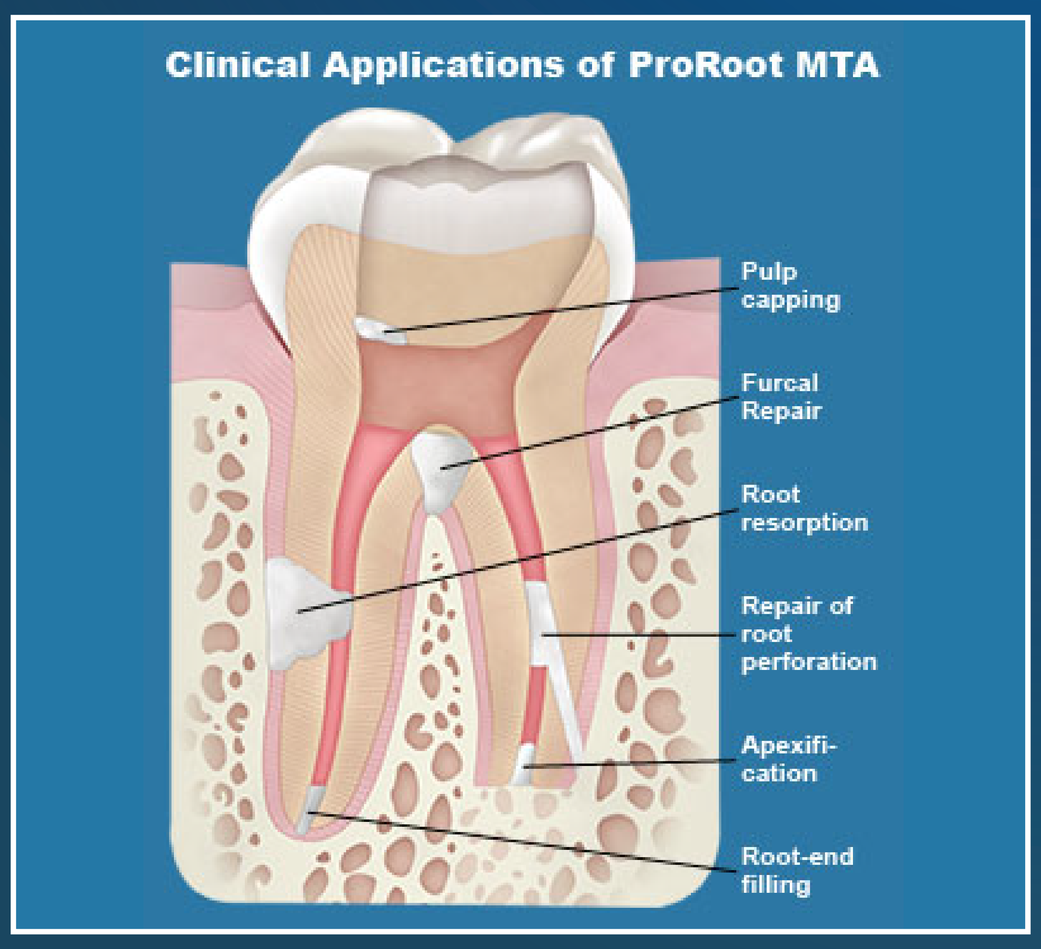
GOAL: The purpose of this paper was to review the composition, properties, biocompatibility, and the clinical results involving the use of mineral trioxide aggregate materials in endodontic treatment, the early pulpal cell response and the onset of reparative dentine formation after capping application of MTA and In root canal therapy, after Apicoectomy.



MATERIALS AND METHODS:
A review of the literature was performed by using electronic and hand-searching methods of scientific papers for the chemical and physical properties and the potential use of this materials in dental pathology.



RESULTS: MTA materials have been shown to have a biocompatible nature and have excellent potential in endodontic use. The experiments indicate that MTA is an effective pulp-capping material, able to stimulate reparative dentine formation by the stereotypic defensive mechanism of early pulpal wound healing. MTA has shown to allow a normal healing response including the formation of new cementum over the restored root interface and excellent biocompatibility when communicating with vital tissues. In the clinical environment where complete removal of moisture is not always possible, MTA uses it hydrophilic chemistry to its advantage where setting to a solid barrier is necessary to be an effective root repair and root end material.

CONCLUSION: Considering the present literature review, MTA has various exciting clinical applications as it has numerous qualities mandatory for an ideal dental material; MTA is an excellent biocompatible material with innumerable qualities required of an ideal material.