

PATIENT NAME: SUBHANI OP.NO: 232567 AGE/SEX: 21/M

PERFORATION REPAIR BY MINERAL TRIOXIDE AGGREGATE

Perforations can be defined as mechanical or pathological communications between the root canal system and external tooth surface. Several materials have been used to repair perforations like amalgam, zinc oxide-eugenol cements (IRM and Super-EBA), glass ionomer cement, composite resins, resin-glass ionomer hybrids.

In recent times interest has centered on use of Mineral Trioxide Aggregate which has fulfilled the requirement of an ideal material such as biocompatibility and superior seal when compared to Amalgam, IRM and Super EBA. MTA has been used successfully in several clinical applications such as Root end filling material, Pulp capping and as well as Pulpotomy.

The Mineral Trioxide Aggregate was developed by Dr. Torbinejad at Loma Linda University in the year 1993. The chemical composition of MTA was determined by Torabinejad et al., which consisted of fine hydrophilic particles, and the main components were tricalcium silicate, tricalcium aluminate, tricalcium oxide, and silicate oxide. Bismuth oxide acted as a radioopacifier. They declared that calcium and phosphorus were the main ions in MTA. Microscopic examinations of periodontal tissues after perforations in the furcal area and subsequent sealing with MTA demonstrated repair of the periodontium and new cementum formation over the material.

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The present case report of furcation perforation repaired by Pro Root MTA(Mallifer ,Dentsply,Switzerland) ProRoot MTA has excellent sealing ability.

Root perforations adversely affect the prognosis of teeth.Immediate sealing of perforations enhances the repair process. The time between perforation and repair is one of the most critical factors for success, Inadequacy of the repair materials can also be a contributing factor to the poor outcome of repair procedures.

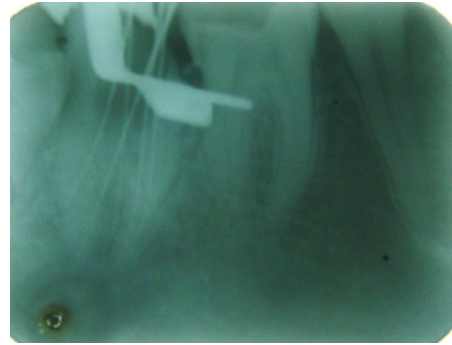
Despite an accurate diagnosis, immediate treatment planning, suitable perforation repair material is a key element in successfully sealing artificial channels which were created .An ideal material should adhere to the root canal wall while maintaining appropriate sealing and should be biocompatible or bioactive.In addition material should be dimensionally stable, insoluble in tissue fluid, non resorbable and also radio opaque.

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AGGREGATE***



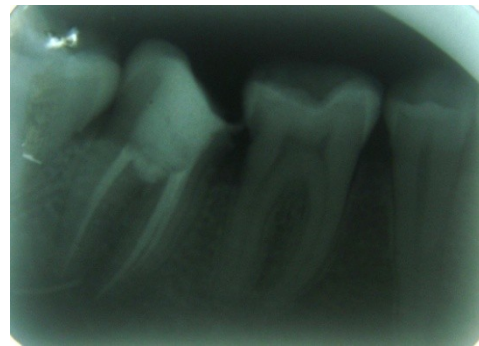
Pre-operative



working length determination



Obturation



corebuild up



Post placed



post -operative