FOUR DIFFERENT CLINICAL APPLICATIONS OF MINERAL TRIOXIDE AGGREGATE IN ENDODONTICS

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Aim

The purpose of this study is to present different clinical use of MTA in endodontics.

Method

First case; 17-year-old female patient has attended our clinic with complaint of cold sensitivity on tooth number 27. After removing decay, pulp exposure was observed. Pulp surface was capped with white MTA (Angelus, Londrina, PR, Brazil). Temporary restoration was applied with use of glass ionomer cement (i-FIL EU). One week later permanent restoration was completed with composite (Cavex, Holland BV) filling material. Neither clinical symptom nor radiographic pathology was observed on 1 year clinical and radiographic recall.

Second case; after radiographic examination, furcation perforation and bone resorption around distal root were observed at 46-year-old female patient’s tooth number 36. Perforation area was sealed with white MTA at first session and root canal treatment was completed. Healing in periapical bone lesion was observed in radiographic evaluation and no clinical symptoms were found in tooth on 1 year clinical recall.

Third case; large and short root canal and periapical bone destruction were observed in radiographic examination of tooth number 22 belonging 20-year-old female patient who had a trauma 10 years ago in anterior area of upper jaw. Root canal was filled with white MTA to strengthen the tooth. Healing in periapical bone lesion was observed in radiographic evaluation and no clinical symptoms were found in tooth on 1-year clinical recall.

Fourth case; 29-year-old female patient has attended to our clinic with complaint of percussion on tooth number 12. As a result of radiographic evaluation, of the tooth, whose root canal treatment and apical resection treatment was applied 6 months ago, lack of root end filling and lesion in periapical area were observed. After root canal retreatment, white MTA was applied as a retrograde filling material. Healing in periapical bone lesion was observed in radiographic evaluation and no clinical symptoms were found at 6-months
clinical recall.

**Results**

All cases were examined between 6 months and 1 year both clinically and radiographically. The tooth preserved its vitality after a year in the case which MTA was used as pulp capping material. Healings in periapical lesions were observed in other cases, where MTA was used as furcation perforation repair, permanent root canal filling, root-end filling material.

**Conclusion**

Considering the sealing ability and biological aspects of MTA, using it for pulp capping, perforation repair, root canal filling and root-end filling filling material in clinical practice seems to be a good treatment option.