

Furcal perforation repair using MTA: Case report

Su-Jung Park*, Yun-Chan Hwang, Wonmann Oh, In-Nam Hwang

Department of Conservative Dentistry, School of Dentistry, Chonnam National University, Gwangju, Korea

I. Introduction

Root perforation is an undesirable incident that can occur at any stage of root canal therapy. Furcation perforations may be treated either nonsurgically or surgically. Factors affecting the prognosis include location, adequacy of seal, degree of contamination and the material used to seal the perforation. A very important factor is the type of the repair material since many have been previously used. The ideal properties of a perforation repair material must be biocompatible, excellent sealing qualities, nontoxic, radiopaque, bacteriostatic, insoluble in the presence of tissue fluids, and capable of promoting regeneration of the periradicular tissue. The great number of these implies that none of them fulfils the criteria for the ideal repair material. MTA has recently been advocated for the repair of root perforation since approved by the FDA in 1998 for use in pulp capping, root-end filling, perforation repair, and apexification.

Following cases present surgical repair and non-surgical repair of posterior furcal perforation using MTA.

II. Case Presentation

Case 1

1. Gender/Age: F/14yr
2. Chief Complaint: Referred from Local hospital for perforation repair on #36
3. Past Dental History: Undergoing Root canal therapy on #36
4. Present illness: pulpal floor perforated on #36
5. Impression: Furcal perforation on #36
6. Tx. Plan: Extraction or Intentional replantation with perforation repair

Case 2

1. Gender/Age: F/62yr
2. Chief Complaint: Referred from LCD for root canal therapy on #36
3. Past Dental History: Undergoing RCT on #36, 37
4. Present illness: #36 - incomplete RCT(mesial canals missed), P/R(+)
5. Impression: Acute Apical Periodontitis
6. Tx. Plan: Re- endodontic tx. → furcal perforation during canal negotiation
 → RCT with MTA repair

III. Conclusion

MTA can be used effectively in the treatment of perforations in a furcation area with surgical or non surgical approach. This material, through its effective biocompatibility and sealability, has provided clinicians with a powerful tool for the repair of teeth that would otherwise require extraction and replacement.