



Apical plug technique using mineral trioxide aggregate

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I. Introduction

A major problem in performing endodontics in teeth with necrotic pulp and wide open apex is obtaining an optimal seal of the root-canal system. Numerous procedures and materials have been utilized to induce root-end barrier formation. Recently, Mineral Trioxide Aggregate(MTA) has been proposed as a potential material to create an apical plug at the end of root canal. The aim of this report was to present the short-term follow-up results in 3 cases with necrotic pulp and open root apex which were managed with the MTA apical plug technique, using microscope.

II. Case presentation

<Case I>

1. Sex/age:M/12
2. Chief complaint(C.C):Referred from Dept.of PEDO for treatment of #36
3. Past Dental History(PDH):Undergoing root canal treatment on #36 at the local clinic
4. Present Illness(P.I): Per(+),pal(+),gingival swelling(+) on #36
5. Impression: Chronic apical abscess
6. Tx Plan: Root canal treatment on #36

<Case II>

1. Sex/age:F/12
2. Chief complaint(C.C):Referred from local clinic for treatment of #36
3. Past Dental History(PDH):Undergoing root canal treatment on #36 at the local clinic
4. Present Illness(P.I):Swelling on left mandibular body area (+)per(+),pal(+) on #36
5. Impression: Chronic apical abscess
6. Tx Plan: Root canal treatment on #36

<Case III>

1. Sex/age:M/33
2. Chief complaint(C.C): Gingival swelling on # 11 area
3. Past Dental History(PDH): Apicoectomy on #11 at OMFS(10 years ago)
4. Present Illness(P.I): Per(+),pal(+), swelling(+) on #11
5. Impression: Chronic apical periodontitis
6. Tx Plan: Re-root canal treatment on #11

III. Conclusion

At 1-year follow-up period, the clinical and radiographic appearance of the teeth showed healing of the periradicular tissue. MTA would seem to be the material of choice for an apical barrier with its good sealing ability and high degree of biocompatibility.