report,t he regenerative endodontic treatment of an immature tooth with chronic apical periodontitis is presented.

CASE DESCRIPTION: 15 years old the female patient applied to our clinic with pain.In the radiographic examination, an immature mandibular premolar tooth with a large lesion at the root apex. The tooth was diagnosed with chronic apical periodontitis and treatment with a REP was planned. After opening the access cavity, irrigation was performed with 20ml NaOCl, then with 20ml EDTA(%17).The canal was dried and calcium hydroxide was placed. A temporary filling was placed and an appointment was made for 4 weeks later. The patient had no symptoms in the second session. Anesthesia was performed with mepivacaine(%3) without vasoconstrictor. It was irrigated with 20ml EDTA(%17) and dried with a paper point. Bleeding was caused by over-instrumenting. The canal was filled with blood up to the cemento-enamel junction and MTA was placed. It was completed with a direct composite restoration and the patient was followed up. During the follow-up,it was observed that the lesion was healed and the root apex was closed.

DISCUSSION: This study attempted to demonstrate the success of REP in the treatment of immature teeth. With REP, lesions can heal and a dentin bridge can form at the open apex.

CONCLUSION/CLINICAL SIGNIFICANCE: The success of REP cannot be ignored, but it is important to choose the right case and stick to the procedure. Future studies on REP will confirm this.

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Endodontic treatment of upper incisors with periapical lesions: case report

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INTRODUCTION: This case report shows the healing of teeth with large periapical lesions following endodontic treatment without apical surgery.

CASE DESCRIPTION: A 17-year-old female patient with trauma history was admitted to our clinic with the complaint of persistent intraoral-fistula and recurrent swelling in the upper-anterior region. Clinical examination revealed hypersensitivity to percussion, palpation and first-degree mobility. After opening access cavity, rubber-dam was applied. Working lengths were determined with an apex-locator and confirmed by radiography. The teeth were prepared to #140 and #130. Irrigation with 2.5%NaOCl was performed after each file and 17%EDTA, distilled water and 2.5%NaOCl were used as final irrigation. Calcium hydroxide was used as an intra-canal medicament. After one week, at the second session, root canal filling was decided since both teeth were asymptomatic. The canals were obturated using cold lateral condensation technique. At the 9-month follow-up, the teeth were asymptomatic and the lesions were healed radiographically.

DISCUSSION: Traditional endodontic treatment should be the first choice in the treatment of periapical lesions because of healing potential. Calcium hydroxide is commonly used material in endodontics due to its bacterial effects.

It has been known that the use of calcium hydroxide as an intracanal medicament for one week eliminates bacteria in root canals and facilitates healing. In these cases, calcium hydroxide was used; nine-month follow-up radiographs after root canal filling confirmed healing of the lesions, with trabecular formation and density change and asymptomatic teeth.

CONCLUSION/CLINICAL SIGNIFICANCE: Using the right materials with right indication during treatment will affect prognosis, while protecting the clinician and the patient from both financial and moral losses. Periodic follow-ups allow transparent evaluation of the treatment results.

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Mandibular molar retreatment, using MTA and apical surgery

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INTRODUCTION: This case report presents that a mandibular molar tooth with large periapical lesion and an old canal filling can be successfully retreated with apical surgery and using Mineral-Trioxide-Aggregate(MTA)

CASE DESCRIPTION: Systemically healthy 35-year-old female patient was referred to our clinic. Intraoral examination revealed that mandibular left first molar tooth had sinus tract. Radiologically, the tooth had an inadequate canal filling and large periapical lesion. Access cavity was prepared under rubber-dam isolation. The apical foramen of the mesial canals could not be reached due to canal transportation from previous endodontic treatment. Working length was determined using periapical radiography and apex locator with reference to the perforation area. After chemomechanical preparation and calcium hydroxide dressing, the cavity was temporarily restored. At the second appointment, the apical 4 mm of the determined working length of the mesial canals was filled with MTA(Bio-MTA, Cerkamed, Poland). The remaining part of the mesial canals and the entire distal canal were filled with the cold lateral condensation technique. After 2 days, apical surgery was performed on mesial root. Permanent restoration was completed with composite resin.

DISCUSSION: The use of a high-quality root canal filling material has a big impact on the surgery's therapeutic outcome(1). Due to its physical and biological properties MTA is one of the materials recommended as root-end filling(2).

CONCLUSION/CLINICAL SIGNIFICANCE: Clinical follow-up at 6 and 10 months showed that the tooth was asymptomatic. Radiographically, periradicular area was completely healed. Apical surgery and the use of MTA provide apical healing for root canals with previous iatrogenic errors such as transportation.

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