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# Management of Localized Chronic Apical Abcess on Mandibular Molar Tooth

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**Case**

A 45 Years old male patient came to the dental OPD of MCM comprehensive specialized hospital of dentistry department requesting treatment for mild paining and pus discharging tooth no 46.

**Treatment**

on a thorough clinical examination and periapical X ray investigation I decided to do routine root canal treatment and root canal treatment was successfully done.

**Conclusion**

An accurate diagnosis and treatment plan of involving cleaning and shaping and proper obturation is a must to perform a successful endodontic treatment

**Keywords:** chronic apical abcess, cleaning and shaping and lateral condensation obturation technique

## Introduction

Chronic apical abcess is defined as an inflammatory reaction to pulpal infection and necrosis characterized by gradual onset, little or no discomfort, and the intermittent discharge of pus through an associated sinus tract. The tooth will not respond to pulp vitality tests, and the radiograph or image will exhibit an apical radiolucency. Usually the tooth is not sensitive to biting pressure but can “feel different” to the patient on percussion. This entity is distinguished from asymptomatic apical periodontitis because it will exhibit intermittent drainage through an associated

sinus tract.

Endodontic therapy is directed toward one specific set of aims: to cure or prevent periradicular periodontitis. The ultimate aim is for patients to retain their natural teeth in function and aesthetics.

It involves access opening to the pulp, cleaning and shaping using a series of hand and rotatory instruments and irrigation solutions and then finally obturating the canals and putting on final restorations on the crown.

## Case Report

A 45 year old male patient came to OPD of MCM comprehensive specialized hospital complaining of a pus discharge and a dull aching type of pain, he has a medical history of Retro viral infection otherwise he is healthy. During examination of his oral cavity I found out that there was a sinus tract apical to tooth no 46 from which pus was discharging and there was also a class 2 cavity on the mentioned tooth.

On thorough physical examination of assessing mobility of tooth and periapical x ray examination patient was diagnosed of having localized chronic abcess on tooth no 46 and he was treated with routine root canal treatment

## Intra Oral Examination

It showed class 2 cavity on tooth no 46 which slightly positive to vertical percussion and there was an associated pus oozing sinus tract in the apical area. Mobility was not there.

## Endodontic Procedure

Access was opened on the tooth using a round bur initially by widening the preexisting class 2 cavity then I used an endo Z bur to fully explore the pulp chamber. Three canals were located two on the mesial side and one on the distal using a hand file of no 10. Then I subsequently used different hand file series of up to no 30 to enlarge the canals and was using an irrigation solution of 5.2% of sodium hypochlorite along with 3% of hydrogen peroxide to clean the canals. When the canals were a dequately large enough I placed (vitapex) calcium hydroxide for 2 weeks so that the periapical radiolucency was to be healing. Finally when the radiolucency was off and the infection was treated well, I obturated the canals with lateral condensation technique of canal filling and the crown was restored with composite resin filling.

## Discussion

Endodontists agree that a major biologic aim of root canal therapy is to address apical periodontitis by disinfection and subsequent sealing of root canal systems.

Objectives of cleaning and shaping

The primary objectives in cleaning and shaping the root canal system are to do the following:

- Remove infected soft and hard tissue
- Give disinfecting irrigants access to the apical canal space
- Create space for the delivery of medicaments and subsequent obturation
- Retain the integrity of radicular structures and shaping

Lateral condensation. Lateral condensation is a common method for obturation. The technique can be used in most clinical situations and provides for predictable length control during condensation. The procedure can be accomplished with any of the acceptable sealers. After root canal system preparation, a standard cone is selected that has a diameter consistent with the prepared canal diameter at the working length. Standard cones generally have less taper when compared with nonstandard cones and will permit deeper spreader penetration which will result in a better-quality resultant seal.

## Conclusion

There is a significant relationship with the presence of purulent discharging sinus tract which is associated with a cavitated tooth and the diagnosis of chronic apical abcess. The treatment plan for such condition is doing a standard root canal treatment which involves a well done mechanical cleaning and shaping using various canal irrigants and finally doing the canal filling in one of the various ways of doing obturation tecniques of lateral condensation and then doing composite restorations. Hence patients suffering from such periapical diseases will be saved from loss of their teeth due to an unwanted extraction treatment plan of most government hospitals here in our country in Ethiopia.

## Reference

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