International Journal of Enhanced Research in Medicines & Dental Care (IJERMDC),
ISSN: 2349-1590, Vol. 6 Issue 8, August 2019, Impact Factor: 3.015

# Non Surgical Management of Periapical Lesion with Extraoral Sinus: A Case Report

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## INTRODUCTION

A cutaneous sinus tract of dental origin is relatively uncommon and, therefore, may be misdiagnosed by some nondental health professionals. A sinus tract is a drainage duct for the suppuration produced by abscesses. The suppuration from theperiapical inflammatory process may be resorbed by the host organism. Otherwise, it will flow through the lessresistant tissue area, creating winding trajectories. Then it will spread through the bone marrow, periosteum, loose connective tissue among the muscle fascias, and finally drain onto the epithelial tissue through either a mucosal or, occasionally, a cutaneous sinus tract. The following report is a case of extra-oral sinus tracts associated with non-vitalmandibular anterior teeth that were treated endodontically and resulted in both hard and soft tissue repair.

## CASE REPORT

A 16-year-old male sought treatment in department of conservative dentistry and endodontics presenting a sinus tract in the chin region of 8 months duration (fig. 1). An electronic pulp tester and a cold test yielded no response from the mandibular right central incisor. A periapical radiograph showed a periapical radiolucent area associated with the mandibular right central incisor (fig. 2).

**Fig 1**

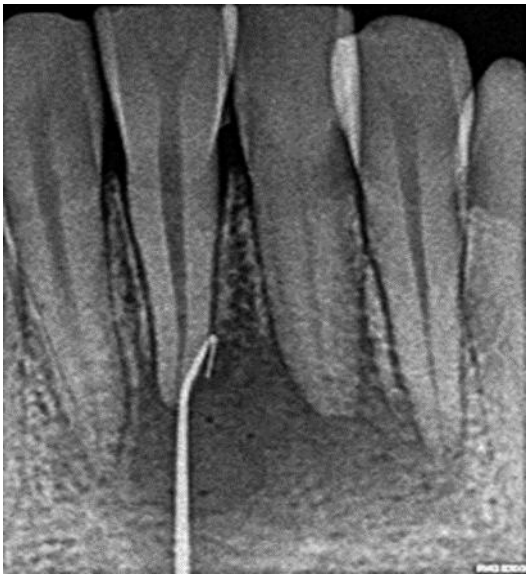

**Fig2**

The root canal shaping was done using hand k files using a 5.25% sodium hypochlorite solution as irrigant. a paste consisting of calcium hydroxide powder in saline was inserted into the root canal with the use of lentulo spirals and was left there for 14 days. During this period the patient remained asymptomatic. The root canal was filled using gutta-percha and sealapex sealer. After 12 months, there was a complete radiographic healing of the periapical lesion (fig. 3). It was unnecessary to repair the sinus tract surgically (fig. 4).

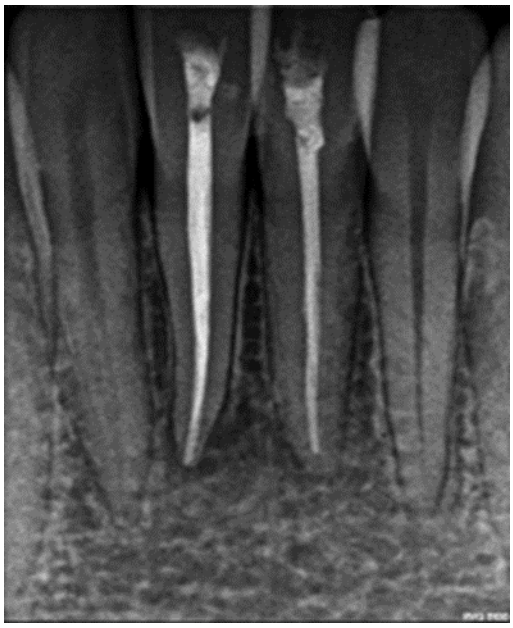

**Fig 3**

**Fig 4**

## DISCUSSION

The purulent exudate of the odontogenic infection will move towards the path of the least resistance from the periapical area. Once the cortical plate has been penetrated, the sinus tract exits as an intraoral or extra oral sinus, depending on the location of the muscle attachments and the fascial sheaths. These sinus tracts were originally thought to be lined by epithelium and therefore to require a surgical intervention apart from the endodontic treatment. But later, studies suggested that it was lined by granulation tissue and not epithelium, which means that it could be intraoral or extraoral and that it could be treated by a non-surgical endodontic treatment .In fact, the sinus tracts in the present case reports healed at the beginning of theendodontic therapy, and there was no aesthetic need for surgical intervention, possibly because of their position in the tissues of the chin and because of their recent development. During the root canal shaping, a 5.25% sodium hypochlorite solution was used followed by a calcium hydroxide-based root canal dressing. In this way, high alkalinity and calcium ion availability were obtained and maintained.

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