

Case Report

# Management of 13 Years Old Male Patient Suffering from Mandibular Extra Oral Sinus - A Case Report

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## ABSTRACT

Extra-oral cutaneous sinus tracts are a rare entity in the pediatric patients. Proper diagnosis is a key factor for successful management. This paper describes a case of 13 years old pediatric patient who was suffering from this condition since 6 months.

**Key words:** - Extra Oral sinus, pediatric patients, proper diagnosis.

## INTRODUCTION

When the periapical abscess bursts on the skin, it results in formation of a non-healing sinus which is known as an extra oral cutaneous sinus. Extra-oral cutaneous sinus is a rare but well discussed in the literature. [2] Main etiology of this type of sinus is a carious tooth. Pulpitis caused due to dental caries if not treated, finally leading into periapical abscess. Clinically it resembles like a nodule, ulcer or an infected cyst over the skin. Extra – oral sinus tract should be differentiated from suppurative osteomyelitis, infected sebaceous cyst, actinomycosis pyogenic granuloma and suppurative apical periodontitis. [1]

## CASE REPORT

A 13 year old male patient reported to the Department of Dentistry of F.A.A.M.C.H with the chief complaint of pus discharge from the right lower jaw region since 6 months. A draining sinus tract which was present extra orally [fig 1a]. Intra orally, there was a grossly decayed mandibular right first molar tooth [fig1b]. Tenderness on percussion is absent. Oral

hygiene maintenance is poor. The patient had a history of pain in the over right back region one year back. The pain was sharp, shooting, throbbing and radiating in nature, and the pain increased at night and on lying down. After few days pain subsided and occurred intermittently for few months. Later after few months, an extra oral pus accumulation was evident with respect to lower on right side. For the treatment of extra oral abscess, the patient visited a local PHC, where incision and drainage were done 6 months ago. The patient was not referred to a dental surgeon for consultation. Now after 6 months, when the pus controlled can't be achieved by using of medication the patient was referred to the dentistry Department of F.A.A.M.C.H. An intra oral periapical radiograph revealed associated periapical infection with grossly carious right mandibular first molar.

Treatment included extraction of the offended molar and the sinus tract was treated with to and fro movement of gauze soaked in povidine iodine [fig1c]. H<sub>2</sub>O<sub>2</sub> irrigation was done to remove the dead necrotic tissue of the tract and facilitate healing.



Fig1a

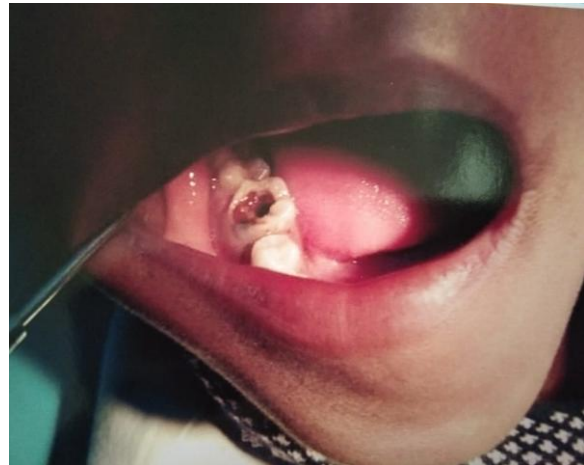


fig1b



Fig1c



## DISCUSSION

Mandibular extra-oral sinus is often misdiagnosed with suppurative osteomyelitis. It is most oftenly associated with a dental pathology. By proper diagnosis and treatment we can minimize patient discomfort and complication like sepsis and osteomyelitis. [3]

Acute periapical abscess is drain through a path of least resistance intra orally or extra orally by making a sinus tract. It can also spread to the deeper oral tissue and caused space infection. The inflammation at root apex may persist for many times after formation of a sinus tract, because of the drainage through the sinus tract. Chronic periapical abscess may remain asymptomatic for longer duration of time. [4]

Sinus tracts form both intra orally and extra orally. Sinus tract that have a dental etiology are located intra orally and extra oral sinus tract is often located in a

close relationship with the offending tooth. [5]

Submandibular region and chin are the most common location where this sinus tract are oftenly formed. [6]

Cutaneous sinus tract clinically present as erythematous, non tender, fixed nodule or cystic lesion over the skin of the lower facial region. This sinus tract formed after a long period of time and located at a distant site from the primary source of infection. Most of the time patient does not remember of any odontogenic pain. [2]

The pain disappears as soon as the periosteum is perforated. A sinus tract can be confirmed by manual palpation and on palpation it feels like a cord like tissue on the skin over the bone. [7]

Along with the topical and oral antibiotics other treatment modalities such as surgical excision, biopsy, a radiotherapy

have been suggested but these are all inappropriate. [8]

The treatment of these offended teeth mainly depends on the overall health, patient cooperation, the position of the tooth and radiographic findings. [8]

Both the surgical and non surgical modalities can be used to treat these types of cases. Firstly a non surgical approach should be initiated. Cleaning, shaping and filling of the root canal and periradicular region determine the success of the treatment and good periradicular healing. [9]

If the tooth can't be restored endodontically the extraction is recommended. [10]

Many methods have been introduced for drainage of pus. This included perapical perforation of the root during root canal treatment so that the pus can drain through orthograde approach. In case of large sinus an extra oral path way can be created for quick relief. Shoelace technique is an extra oral method in which a gauze piece soaked in povidone iodine inserted extra orally to make a path for pus discharge. [11]

To determine the origin of the offended tooth a gutta-percha cone or a lacrimal probe can be inserted extra orally. [1]

Treatment must be focused on the elimination of the source of infection. After the root canal treatment granulation tissue forms and inflammation subsides and finally normal architecture of the periodontal ligament can be achieved. [12]

## CONCLUSION

Proper diagnosis is the key of treatment in case of mandibular extra oral sinus tract of dental origin. But in most of the cases due to the wrong diagnosis the appropriate treatment can't be achieved by

the patient. It leads to the reoccurrence of the sinus tract. So, a careful oral examination is mandatory prior to the final diagnosis.

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