

Surgical Management Of Nonhealing Extra-Oralcutaneous Pus Draining Sinus Tract Of Odontogenic Origin. A Case Report

AUTHORS:

Dr.Mayank Singhal¹, Dr Manoj Goyal², Dr Pratibha Kaushik³, Dr Kalyani Singh⁴, Dr.Amit B. Lall⁵, Dr. Sanjeev Tomar⁶, Dr.Anupam Bhardwaj⁷.

¹Associate Professor, Department of Oral & Maxillofacial Surgery, Santosh Dental College, Santosh Deemed To Be University, Ghaziabad.

²Professor, Department of Oral & Maxillofacial Surgery, Santosh Dental College, Santosh Deemed To Be University, Ghaziabad

³Resident, Department of Oral & Maxillofacial Surgery, Santosh Dental College, Santosh Deemed To Be University, Ghaziabad.

⁴Resident, Department of Oral & Maxillofacial Surgery, Santosh Dental College, Santosh Deemed To Be University, Ghaziabad.

⁵Professor and Head, Department of Oral & Maxillofacial Surgery, Santosh Dental College, Santosh Deemed To Be University, Ghaziabad.

⁶Associate Professor, Department of Oral & Maxillofacial Surgery, Santosh Dental College, Santosh Deemed To Be University, Ghaziabad.

⁷Senior Lecturer, Department of Oral & Maxillofacial Surgery, Santosh Dental College, Santosh Deemed To Be University, Ghaziabad,

CORRESPONDING AUTHOR:

Dr.Mayank Singhal

Designation: Assoc. Professor

Department: Department Of Oral & Maxillofacial Surgery

Institution: Santosh Dental College, Santosh Deemed To Be University Ghaziabad

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ABSTRACT: Inflammation in a circumscribed area may lead to development of a path to the epetlial surface, this in turn leads to the development of cutaneous sinus. For evaluation, diagnosis, and treatment of the same, patient visits physician first resulting in no consideration for dental etiology most of the times.

Sometimes the ignorance and misdiagnosis can lead to persistence of infection resulting in recurring sinus. Successful management of the odontogenic cutaneous sinus requires proper diagnosis. A male patient, Presented with skin lesions of odontogenic etiology with discharging sinus, and unresponsive to antibiotics. The patient was treated by

surgical excision of Cutaneous Sinus tract along with Extraction of offending tooth.

INTRODUCTION:

Inflammation in a circumscribed area may lead to development of a path to the epithelial surface; this in turn leads to the development of cutaneous sinus. In the literature, the terms fistulas and sinuses are often used interchangeably. It was reported in the reported literature that sinus tracts is lined with granulation tissue instead of epithelium¹. Extra oral draining sinuses mainly develops due to chronic inflammation of pulp². The perforation of the cortical plate is due to the by-products of various Microorganisms which are inhabitant of periapical region³. The abscess may become chronic and sometimes asymptomatic if there is sinus tract closure⁴. Chronicity of lesions can increase if left undiagnosed and unnecessary treatments that lead to skin scarring can wreak havoc on facial aesthetics. There is scarcity of literature regarding extra oral sinus lesions leading to misdiagnosis and consequent mismanagement. The location of cortical perforations depends on the relationship between the inflammatory process and muscle attachment^{6, 10}. It is well documented that infection can spread to extra-oral areas if the tip of the tooth is above or below the muscle attachment^{2, 4, 7}. We also find that sinus passages are more common with mandibular teeth as compared to maxillary⁸⁻¹⁵. There is still a diagnostic dilemma regarding the origin of Cutaneous tract. For

this reason, the differential diagnosis of this entity is of utmost importance. In the present article, the diagnosis and treatment of a case of cutaneous sinus tracts of odontogenic origin is described.

CASE REPORT:

A 52-year-old male patient, Presented with skin lesions of dental etiology Frequent discharge of pus, unresponsive systemically Antibiotics. The patient also complained of pus drainage around the sub-mental region The patient had history of pain that was sharp in nature since last few weeks. The patient was febrile when presented to us. The medical history was nonsignificant. The patient first noticed swelling in the sub mental region almost one month back, which soon developed into a lesion with spontaneous drainage. After this the patient went to his family physician for the treatment of the same and was prescribed systemic antibiotics by the physician. The lesion didn't settled and due to the recurrence of the lesion the patient was referred to Santosh Dental College and Hospital.

On extra oral examination a Cutaneous lesion (4-5cm) in left side of submental region along with the pus discharge on palpation was seen [Figure 1].

Intra oral examination revealed grossly decayed left mandibular central and lateral incisor teeth. The involved teeth with the lesion i.e. 32 were not tender on percussion. There was evidence of dental caries in the

radiograph, which was approaching the pulp tissue along with periapical radiolucency in the apical third region of the teeth with the definitive diagnosis of apical periodontitis.



Figure 1: Extraoral view exhibiting pus discharge on palpation

Extraction of the offending teeth was performed under L.A. and Surgical excision of sinus tract was planned with minimal residual scar formation. Primary incision was made in the elliptical manner around the lesion under local anesthesia [Figure 2].



Figure 2: Primary incision around the lesion

The tract measuring approx. 2- 2.4 cm in size was dissected and was excised in Toto. Than the skin was undermined with the help of dissection forceps. Sub-cuticular sutures were placed using vicryl 3-0 [Figure 3]. The patient was followed for six months, and by the end of third week the skin defect was completely healed without scarring, which was esthetically satisfactory for the patient.

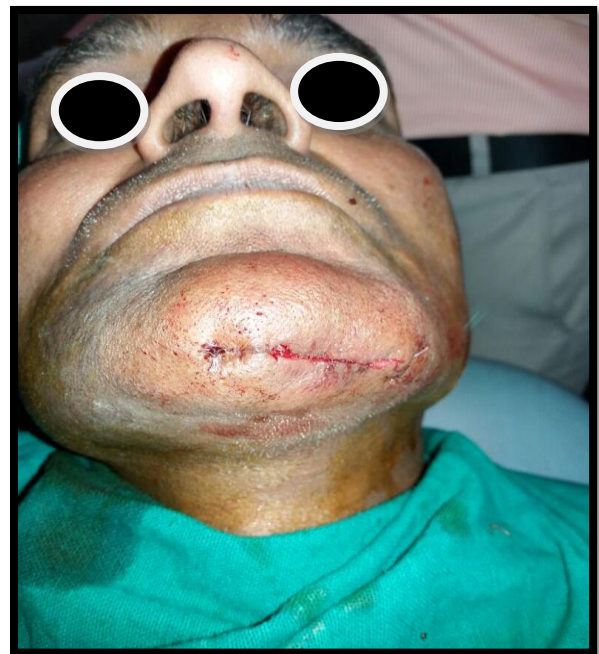


Figure 3: Subcuticular suture placed

DISCUSSION:

The Extra oral draining sinus tracts of odontogenic origin are not well described in the literature ^{6, and 7} however, these lesions often depicts clinical presentations very similar to other relatively rare facial lesions. , can pose a diagnostic challenge ^[2, 8]. The differential diagnosis of these lesions includes various fungal or bacterial

infections, neoplasms, traumatic lesions, chronic tuberculosis lesion and Osteomyelitis⁹. A thorough and detailed patient examination is a must for making the diagnosis of a cutaneous sinus tract. Winstock¹⁰ described extra oral draining sinuses with odontogenic infections. The path of spread of chronic infections of dental origin was well described by Kaban¹¹. As per the literature, majority of the reported cases are associated with mandibular teeth¹². Out of this the chin and submental region are the mainly involved sites¹³. If we follow the literature, the tooth if restorable, root canal treatment is the treatment of choice, whereas the extraction of the tooth is indicated when the tooth is non restorable. Only extraction of the offending tooth is not the treatment of choice in case of chronic sinus tract, the excision of tract is must. This can be done by complete excision or by cutting it from the insertion to the underlying alveolar bone. Antibiotic therapy is indicated when there are signs of systemic involvement (e.g., fever or lymphadenopathy)¹⁵.

CONCLUSION:

The resolution of the sinus tract can be achieved by, either complete elimination of pulp infection by conservative treatment or extraction of the offending tooth. But in refractory cases of extra oral draining sinuses of odontogenic origin, wound contraction and scar tissue formation makes

it necessary for surgical management to excise the tract.

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