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A RARE CASE OF OROCUTANEOUS FISTULA

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ABSTRACT

Orocutaneous (or orofacial) fistulas are infrequent conditions in which there is a pathological pathway between the oral cavity and cutaneous surface of the face. Here we present a 24 year old male with no comorbidities but with discharge from right cheek and pain since 9 months. On examination there was single sinus present over right mandibular region with yellowish discharge and irregular edges with scarring and thinning of surrounding tissue. X ray fistulogram revealed diagnosis of orocutaneous fistula. Fistula excision was done under local anaesthesia with sedation. Sinus tract was attached up to molar tooth and specimen sent for histopathological examination. Histopathological report showed evidence of an inflammatory process. The medical management like antibiotic and tooth extraction was also done and fistula healed subsequently.

KEYWORDS

Orocutaneous fistula, Mandibular region, Fistulogram, Sinus tract, Histopathology

INTRODUCTION

Orocutaneous fistulas are the rare condition in which there is a pathological communication between oral cavity and skin. In medical and dental literature, the terms fistulas and sinus tracts are often used to describe the same condition. Most common site of fistula is mandibular region, chin, cheeks etc. [1]. The chronic dental infection, dental inflammation, trauma, salivary gland tumours and neoplasms are the most common causes of the orocutaneous fistulas. And they may lead to functional, aesthetic, and psychological problems due to the irrepressible leakage of saliva from the oral cavity to the face [2]. Complications that occur include sepsis and osteomyelitis. Fistula associated with malignancy can lead to complications and may be life threatening. The literature does not clearly demonstrate the incidence or treatment of the orocutaneous fistulas. Here we present a rare case of orocutaneous fistula.

Case Report

A 24 year old otherwise healthy male with no comorbidities presented in the outpatient Department of otorhinolaryngology, with the chief complaint of discharge from right cheek and pain since 9 months. On extraoral examination, there was single sinus present over right mandibular region with yellowish discharge and irregular edges with scarring and thinning of surrounding tissue (Figure 1a). The patient did not complain of paresthesia. None of the teeth in the oral cavity were carious. Taking the brief history of the presenting illness, the patient confirmed that, nine months ago, he first developed pain in the lower right cheek area, which was mild in nature. Three days later mild swelling also appeared in the same area. He approached a general physician who had recommended him antibiotics and analgesics that gave symptomatic relief but after eight weeks, pain and swelling reappeared. This time however, he also noticed an opening of foul-smelling yellowish discharge on the right side of the face. He was treated for four months with various topical and systemic antibiotics based on the diagnosis of an infection of the superficial skin. He was subsequently referred to us to rule out the possibility of odontogenic origin of the lesion as it was not cure. His medical history was non-contributory, and there was no trauma history to that region beforehand. The patient never suffered from tooth pain and did not consult any dentist about this problem. But from the right side he described a difficulty in chewing.

Hence, correlating history and clinical examination as well as X ray fistulogram revealed diagnosis of orocutaneous fistula. Under all aseptic precautions, fistula excision was done under local anaesthesia with sedation, (Figure 1b,c & d). Sinus tract was attached up to molar tooth and specimen sent for histopathological examination. Histopathological report showed evidence of an inflammatory process. The medical management like antibiotic and tooth extraction was also done and fistula healed subsequently, (Figure 1e).

Figure 1: a) Pre-operative Picture, b & c) Intraoperative view of the operation site, d) Excised remnants of the infected site and e) Post-operative Picture

DISCUSSION

A fistula is an abnormal pathway between two anatomic spaces or a pathway that leads from an internal cavity or organ to the surface of the body [3]. A sinus tract of endodontic origin is caused by pulp necrosis followed by invasion of microorganism causing an inflammatory lesion in the periapical area of the affected tooth. Chronic dental periapical infections or dentoalveolar abscesses cause the most common intraoral and extraoral fistulas. These dental periapical infections can lead to chronic osteomyelitis, cellulitis, and facial abscesses. Infection can spread to the skin if it is the path of least resistance. Eventually the inflammatory process can reach the surrounding soft tissue and form a path for drainage. The site of extraoral drainage depends on which tooth is diseased and specific factors such as virulence of the microorganism and relation between anatomy and facial muscle attachment. Fascial-plane infections, space

infections, and osteomyelitis can cause cutaneous fistulas. Fascial-plane infections often begin as cellulitis and progress to fluctuant abscess formation. Compared with the other conditions, fluctuant abscess formation is more likely to result in cutaneous fistulas. However the oro-cutaneous fistula of odontogenic origin can be misdiagnosed and confused with traumatic injuries, furuncles, bacterial infections, carcinomas, osteomyelitis, foreign objects and congenital fistulas.

One case report [4] demonstrates this occurrence from a periapical infection from the right central mandibular incisor, which drained to the patient's chin. Because the tooth could not be restored, it was extracted, which resolved the lesion. In another case with cutaneous manifestations involved a 44-year-old woman with a draining lesion to the skin just lateral to the nasofacial sulcus. Oral antibiotics did not help resolve the lesion. The patient had poor dentition, and a panoramic radiograph showed 2 periapical radiolucencies of the maxillary right lateral incisor and canine. The teeth were extracted, which resolved the lesion. Sheehan et al [5] recommend a dental examination and radiographs to rule out infection of dental origin to the cutaneous face or neck.

As the clinical cutaneous and oral manifestations are generally scarce and often nonspecific, the diagnosis of orocutaneous fistula requires a high degree of suspicion. Prognosis is excellent when treatment initiates promptly, particularly if there was a dental infection. Otherwise, orocutaneous fistula associated with malignancies can lead to complications and may be life-threatening. Yasui et al [6] reported a cutaneous fistula of dental origin. A 75-year-old Japanese woman presented with the chief complaint of a left-cheek skin lesion with mild pain. A subcutaneous nodule with erythematous skin was on her left cheek. Dental examination demonstrated a radiolucent area in the left-lower first molar periapical region. The tooth was asymptomatic. Antibiotic therapy and endodontic therapy eliminated the subcutaneous nodule. The authors recommend a complete dental evaluation be performed when a subcutaneous facial nodule is encountered.

The diagnosis and treatment of oral fistulas are well-described subjects in the literature. However, they are often misdiagnosed by dentists and physicians as cutaneous lesions or non-odontogenic infections. In the study of Lee et al., the majority of patients had been misdiagnosed initially. Oral cutaneous fistulas were thought to be an epidermal cyst (24, 2%), furuncle (21.2%), subcutaneous mycosis (15.2%), squamous cell carcinoma (9.1%), basal cell carcinoma (6.1%) and foreign body granuloma (6.1%) [7]. The diagnosis of an oral fistula may be challenging because of the complex oral anatomy, and it requires the aid of radiological, microbiological, and/or pathological methods. In addition, detailed history taking and clinical examination are key factors for the diagnosis of oral fistulas. The possibility of a neoplastic cause may require a histopathological examination of oral cutaneous fistula. In this case histopathological analysis showed evidence of an inflammatory process.

CONCLUSION

A dental cause must be considered for cutaneous sinus tract involving the face or neck.

Clinical and radiographic examination can contribute to the localization of teeth involved and avoid unnecessary antibiotic or surgical therapy. With sinus tract of dental origin spontaneous closure of the fistula should be expected within 2 weeks after root canal treatment or tooth extraction. In this cases sinus tract healed following the initial treatment session.

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