UNUSUAL PRESENTATION OF A SINUS DUE TO IMPACTED LOWER THIRD MOLAR – A CASE REPORT

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ABSTRACT

Infections associated with the impacted lower third molar usually cause moderate to severe swelling at the region of the angle and body of the mandible. On rare occasions the abscess formed may track to the extra-oral region forming a sinus on the face. This paper presents a case in which a facial sinus occurred as a result of an odontogenic infection associated with pericoronitis around an impacted lower third molar in which the sinus tracked extra-orally and was higher than the site of the origin of the infection.

INTRODUCTION

A cervico-facial sinus is a common blind-ended tract discharging on the skin of the face and neck[1]. Odontogenic pathology such as periapical or dentoalveolar abscess is one of the well recognized causes of oro-facial sinus[2]. A sinus caused by a discharging chronic periapical abscess of lower incisor is one of the more common facial sinus which is known as median mental sinus[3].

Pericoronitis associated with an impacted lower third molar, on the other hand, may cause localized swelling at the surrounding areas. The pus formed as a result of pericoronitis is usually seen at the operculum. It may also track to the buccal sulcus, submandibular or submasseteric space. Facial sinus caused by an infection around the impacted third molar is rare due to its anatomical relationship to the masseter muscle, external and internal oblique ridges and submandibular glands which form barriers thereby preventing the spread of pus.

CASE REPORT

A 27-year-old Indian man was referred to the Oral and Maxillofacial Surgery Clinic for the management of a discharging sinus on his right cheek. He initially went to a private medical practitioner to seek treatment. As the symptom was in the facial area, he was directed to see a dental practitioner who in turn referred him for further management.

The patient has been having the discharging sinus on his right cheek for about three months. At the same time he also had a swelling on the same side at the body of mandible region. In an attempt to reduce the swelling, a hot towel was regularly placed over the swelling. He was pleased to see that the swelling had reduced in size but was unhappy because the sinus persisted and kept on discharging. No professional advice was sought.

He was a healthy man with no significant medical history. However, he had never visited any dentist for routine examination or treatment. Extra-orally a sinus was seen on his right cheek (Fig. 1). No discharge could be milked out. A sterile gutta-percha point was inserted to trace the course of the tract which ended near the third molar tooth. Intra-orally, an impacted mandibular right third molar and an infraocclusally erupted

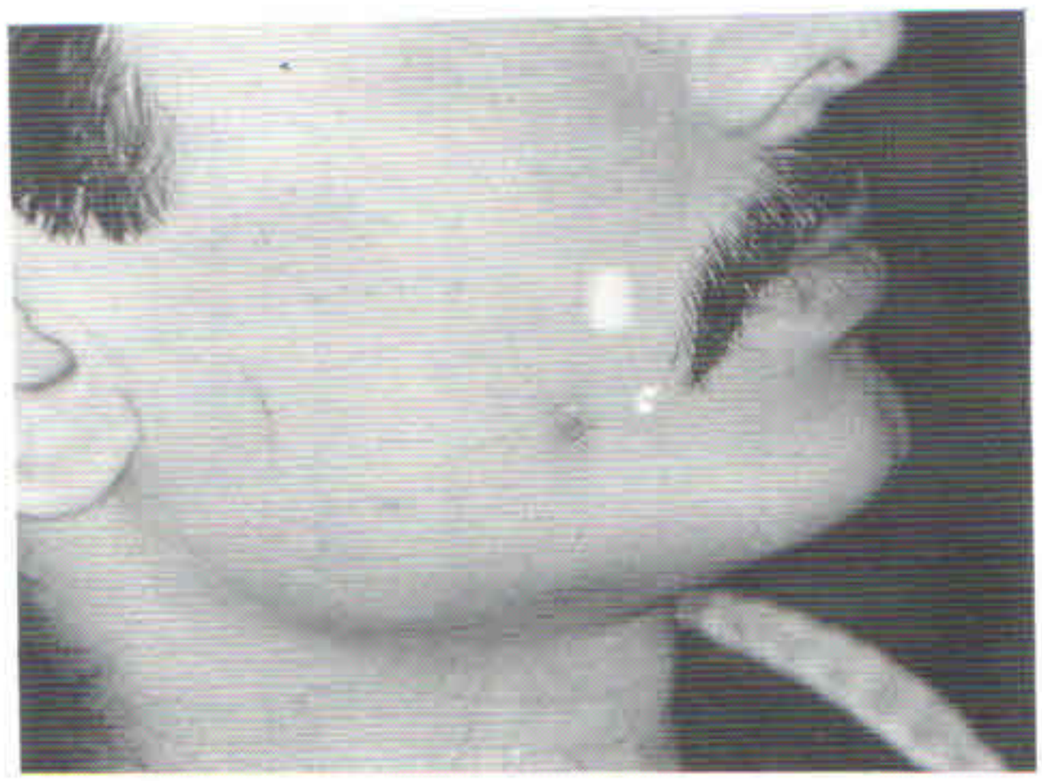

Fig. 1. Photograph showing a dried sinus on the patient's right cheek.

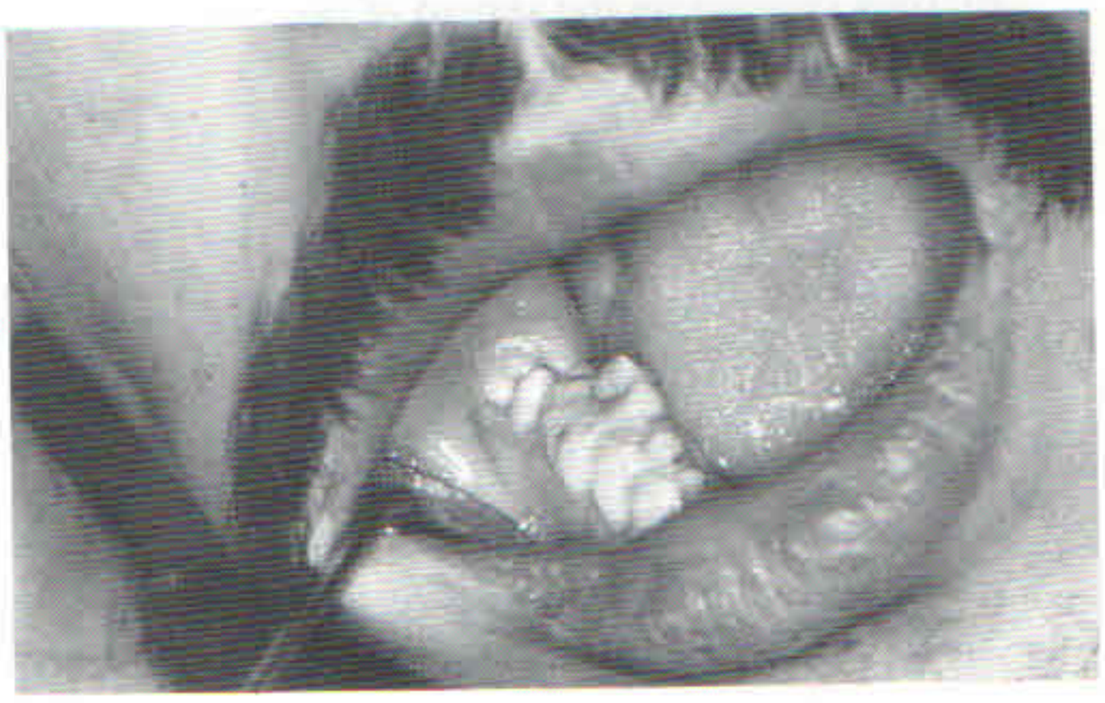

Fig. 2. Intra-oral photograph showing the impacted mandibular right wisdom tooth and an infraocclusally erupted second molar.

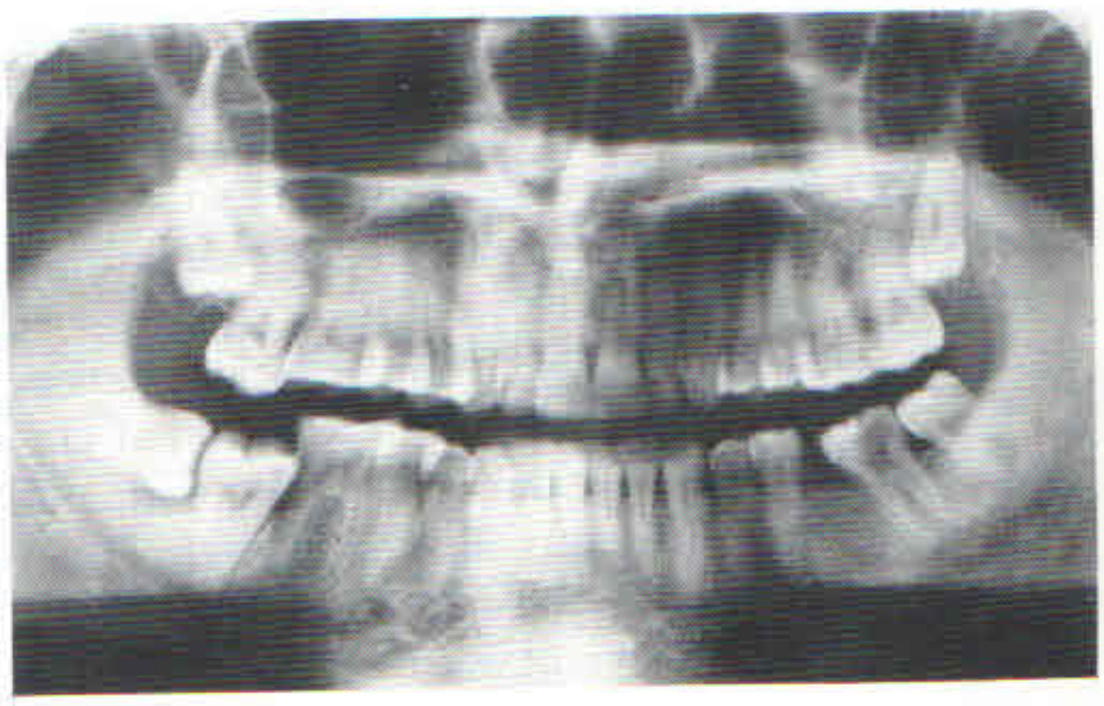

Fig. 3. Orthopantomogram shows the position of the right second and third molar teeth in relation to the occlusal plane.

second molar could be seen (Fig. 2). There was slight swelling and redness of the operculum covering the distal aspect of the tooth.

Orthopantomogram showed that the mandibular right third molar was horizontally impacted. The second molar was also impacted against the first molar below the occlusal plane (Fig. 3). There were no restorations present and all teeth were vital. There was caries of the lower left second molar. A diagnosis of subacute pericoronitis with a sinus tract formation associated with an impacted lower right third molar was made.

The tooth was surgically removed and appropriate antibiotic and analgesic were prescribed. Healing was uneventful and the sinus healed satisfactorily when reviewed a month later. The patient however did not return for subsequent follow-up.

DISCUSSION

Pus formed as a result of pericoronitis usually track buccally along the external oblique ridge, collect buccal to the lower first molar and eventually discharge through a sinus at the buccal sulcus adjacent to the first or second molar. The case presented here is unusual because the opening of the sinus was extra-oral and higher than the impacted third molar.

It is speculated that pus formed as a result of sub-acute pericoronitis has tracked to the anterior border of the masseter. A weak plane may have existed between the masseter and buccinator muscles and as a result of muscle contraction, a pump is created forcing pus to follow the track which ended higher than the occlusal plane; a clinical presentation which rarely occurs in normal circumstances.

There are other possible aetiology of the sinus on the cheek and one of them is a fistula from the parotid duct which could occur as a result of trauma to the face. However, in this case the fluid discharged was confirmed not to be saliva which ruled out the possibility of a parotid fistula. Moreover, the patient had never sustained any facial injury in his life. Other reported causes of facial sinus is tuberculosis in which sinuses were seen on the cheek and infra-orbital area[4]. Other unusual or bizarre facial sinus was due to pseudofolliculitis barbae which was reported by Mitchell[1]. Both causes have been ruled out in this

case.

The sinus dried up and scarred spontaneously after the removal of the third molar which confirmed that the cause of this discharging sinus was infection associated with pericoronitis.

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