

Third molar tooth and buccal space infection: Is it only the tip of the ice berg ?

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ABSTRACT

Space infections and buccal cortical plate expansion are standard characteristics of 3rd Molar related infections. Though clinical & radiographical investigations may reveal causes and spread of infection, surgical exploration may throw surprises, which may change planned treatment protocol. We present a case report of buccal swelling, secondary to 3rd molar infection, though radiologically and surgically a different tale unfolded.

Introduction

Space infections and buccal cortical plate expansion are standard characteristics of 3rd Molar related infections. Though clinical & radiographical investigations may reveal causes and spread of infection, surgical exploration may throw surprises, which may change planned treatment protocol. Carious tooth followed by a remnant follicle are the commonest causes of buccal space infection. An odontome normally presents with cortical plate expansion with buccal plate being the more effected one.[1] This manifests at times like a buccal space infection identical to the one in a space infections

especially if the odontome is infected and shows cystic or abscess collection. We present a case report of buccal swelling, secondary to 3rd molar infection, though radiologically and surgically a different tale unfolded.

Case Report

A 45 years old male patient reported to our clinic, with a swelling in the right buccal region & right angle around 4cm X 3cm (fig. 1). The swelling was slow growing with normal overlying skin. The patient had earlier reported to a local clinic where he was advised antibiotics,



Figure 1. Preoperative clinical picture showing swelling on right side of face.



Figure 2. Preoperative OPG revealed radio-opaque areas in relation to 48.



Figure 3. Intraoperative photograph showing exposure of mass.



Figure 4. Enucleated mass



Figure 5. Postoperative clinical photograph

taken by the patient for 15 days. Intraorally 48 was mildly tender with significant obliteration of buccal vestibule, the tooth was non carious with mild inflammation of the covering gingiva.

The clinical picture was suggestive of periapical pathology in relation to 48. To confirm the diagnosis OPG was advised. The OPG revealed radio-opaque areas in relation to 48 (fig. 2). These areas were suspected to be para molar or normal bone morphology.

After Routine investigations, the patient was found to be diabetic with varying glucose levels in the range of 190-365 mg. Patient was put under diabetic management protocol. Once the glucose levels were controlled, patient was taken up for surgical removal of 48 under GA.

After endotracheal intubation, routine ward's incision was given and sub periosteal dissection was carried out. The entire tooth was exposed. Bone guttering was carried out and the CEJ of the tooth was exposed. An attempt to elevate the tooth was carried out but resistance to path of removal was encountered buccally, after further bone guttering the tooth was loosened but resistance still encountered. American pattern third molar forceps were used to try and deliver the tooth, which was also met by some kind of resistance related to the root morphology. In the quest to negotiate this resistance a figure of eight motion was employed. On performing this maneuver the tooth was removed but to our surprise it had large single root structure identical to a odontome. The size of the structure was around 2cm X 2cm (figs. 3&4). The socket was later examined and was found to be non infected contrary to our pre operative diagnosis of a periapical pathology. The surgical site was closed conventionally. A histopathological study of the tissue revealed complex odontome. The postoperative healing was uneventful (fig. 5).

Discussion

Third molar pathology is a common causes of buccal and pterygomandibular space infection, though they may present with

variable amounts of buccal plate expansion.[2] Carious tooth followed by a remnant follicle are the commonest causes of buccal space infection. An odontome normally presents with cortical plate expansion with buccal plate being the more effected one.[1] This manifests at times like a buccal space infection identical to the one in a space infections especially if the odontome is infected and shows cystic or abscess collection.[3] We are of the strong opinion that in order to unearth the buried pathology it should be mandatory to have a step wise examination of the swelling, thinking in terms of just more than pericoronitis and investigate with modern available tools like CBCT and high resolution USG.[4,5] If the swelling is hard, not indurated, slow progressing with buccal plate expansion especially in a non infected tooth then definitely an odontome or associated pathology should be ruled out.

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