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CT Imaging Features in Pyomyositis of Sternocleidomastoid Mimicking Parotid Abscess.

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ABSTRACT

Pyomyositis is a condition of acute bacterial infection of skeletal muscle. It is commonly seen in tropical region and the presentation depends on the site of involvement. We report a 50 year old man presenting with swelling of left angle of mandible which mimicking left parotid abscess. Later on , imaging and operative findings proved it to be an intramuscular sternocleidomastoid abscess.

Keywords: CT Imaging, pyomyositis, parotid abscess.

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INTRODUCTION

Pyomyositis is a primary bacterial infection of skeletal muscle and it is usually caused by staphylococcus infection. It mostly affect immunocompromised patient such as those with HIV infection, hematological disorder, patient on chemotherapeutic drug and diabetes. Pyomyositis is common and endemic in tropical region. Patient with diabetes has increased risk of infection and associated skeletal muscle damage [1].

Case Report

A 50 year old male , a case of poorly controlled type II diabetes mellitus presented to emergency department with complaint of one week history of swelling over the left parotid region which was associated with pain and fever. There was no history of dysphagia, or any swelling elsewhere in the body. There was no history of trauma, similar episode in the past or any other symptoms present.

Clinical examination revealed an 9 x 7 cm swelling at the angle of left mandible which was tender , firm in consistency, non fluctuant and with displacement of left ear lobe. The overlying skin was inflamed. There was bilateral palpable cervical lymphadenopathy. Needle aspiration from the swelling confirmed pus. Provisional clinical diagnosis of left parotid abscess was made. Patient then was subjected for computed tomography scan of parotid and upper neck and revealed left supraclavicular intramuscular abscess Fig 1a and 1b. Left parotid gland was pushed superolaterally and was normal Fig 2 a and b.

Patient underwent incision and drainage under general anaesthesia. Intra operative finding confirmed the presence of pus within the left sternocleidomastoid. The drained pus was sent for culture and sensitivity study. The culture of the specimen reported as positive for staphylococcus infection. Fig 2 d and c

DISCUSSION

Pyomyositis is a primary bacterial infection of the skeletal muscle and it is usually caused by staphylococcus infection. It mostly affects immunocompromised patients such as those with HIV infection, hematological disorder , patient on chemotherapeutic drug and diabetes. HIV infection is the most commonly associated with pyomyositis [1].

Pyomyositis is common and endemic in tropical region. Patient with diabetes has increased risk of infection and associated skeletal muscle damage [2].

Clinically ,pyomyositis can be divided into 3 stages [4]. The first stage is the invasive stage. In this stage patient may present with unspecific symptoms such as minimal tenderness , fever and anorexia , which is generally neglected. Later , the disease progresses into second stage where the patient presents with more prominent symptoms such as more severe pain , swelling , limited muscle movement and fever. Most of the diagnosis is made during this stage. The third stage is the systemic manifestations which include sepsis and its complication.

Pyomyositis can occur in any part of the body and the commonest site involved is the lower limb [3]. According to Bickel et al in 2002 involvement of the neck muscle is very rare [6]. Only recently, 2 cases of sternocleidomastoid pyomyositis hs been reported [1].

The pathogenesis of pyomyositis multifactorial [5]. However , the exact pathogenesis is unknown.8 Infact skeletal muscle is generally resistant to infection; however the mechanism of bacterial invasion not really understood [1]. According to Kathryn et al in 2010 , 78% of the cultures were positive for staphylococcus infection.3 Diabetes has been an important predisposing factor for pyomyositis [2].

When a patient presented with painful swelling over the parotid region, the differential diagnosis include parotitis, sialoadenitis and parotid abscess. Displacement of the ear lobe is almost pathognomonic of parotid swelling. Other signs and symptoms of parotid abscess include painfull swelling, fever, poor oral intake and indurated parotid swelling. Clinically a parotid abscess is not fluctuant because the parotid gland is covered by inelastic and thick capsule formed by investing layer of deep cervical fascia. With all these features,

we initially concluded patient to have parotid abscess. To have intramuscular sternocleidomastoid pyomyositis mimicking parotid abscess is rare. Treatment of pyomyositis depends on the stage at presentation. The mainstay of the treatment is intravenous antibiotic and drainage of the abscess [8]. An early stage of pyomyositis, high dose of empirical antibiotic which cover staphylococcus aureus may be sufficient [1]. There have been reported 2 cases of tropical pyomyositis of sternocleidomastoid treated with intravenous flucloxacillin and benzylpenicillin and both showed complete recovery on follow up. No specific duration of antibiotic therapy has been established [7]. For stage 2 or suppurative stage, treatment include intravenous antibiotic and drainage of the abscess. One reported case of small stage 2 pectoralis pyomyositis was treated with intravenous antibiotic alone, without drainage. During follow up, he was completely recovered with no sign of recurrence [9].

In this patient, he was started empirically with intravenous antibiotics before the abscess was confirmed and drained surgically. Pus and tissue culture and sensitivity reported as positive for staphylococcus infection which was sensitive for the empirical antibiotics.

CONCLUSION

The diagnosis of pyomyositis require high index of suspicion [8] and any painful swelling in head and neck region, pyomyositis should be considered as one of the differential diagnosis, even in the presented case which clinically mimic a parotid abscess.



Figure 1a

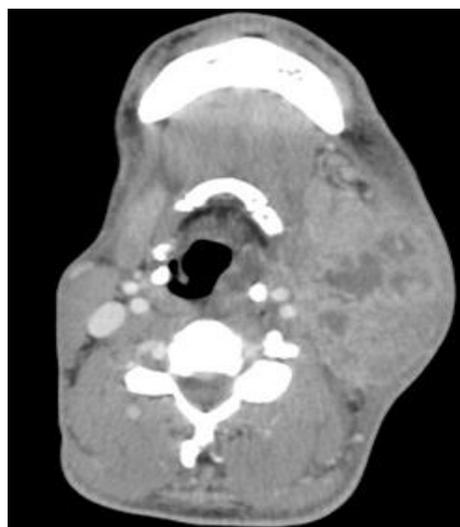


Figure 1b

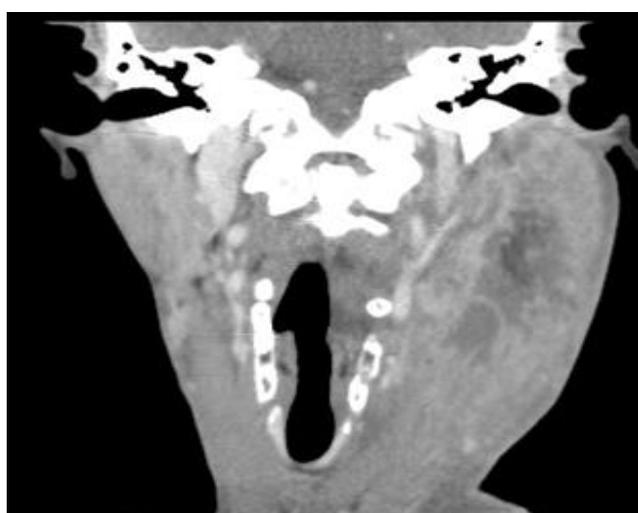


Figure 2a

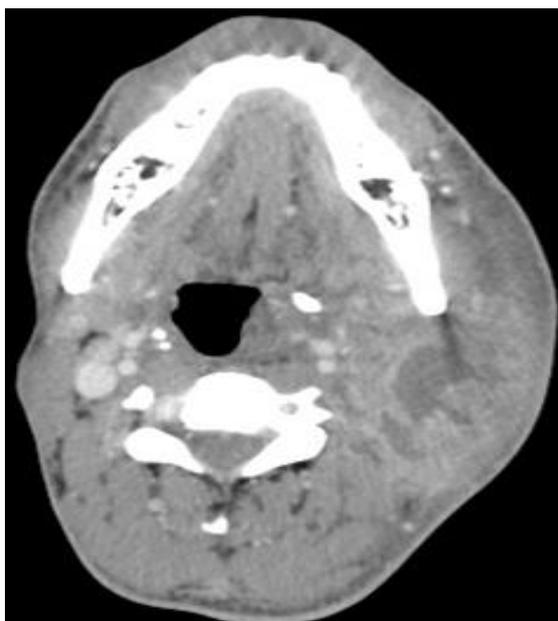


Figure 2b

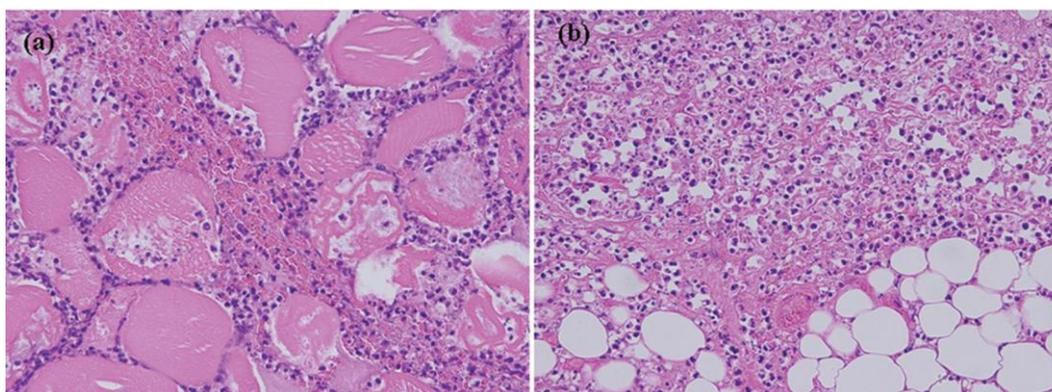


Figure 2 d and c

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