AJMS
(A US National Library of Medicine enlisted journal)
Al Ameen J Med Sci (2012)5(2):203-204
ISSN 0974-1143
CODEN: AAJMBG

CASE REPORT

Botryomycosis Due to *Staphylococcus Aureus*-A Case Report

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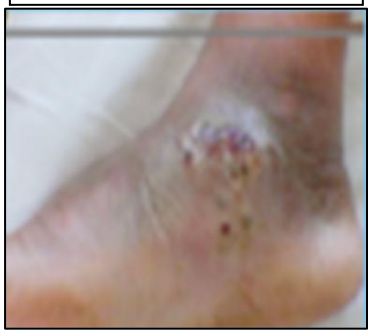
Abstract: *Objectives:* To study *Staphylococcus aureus* as the causative organism of botryomycosis. *Background:* the botryomycosis is a chronic purulent granulomatous lesion of the skin, subcutaneous tissue and visceral organs caused by several bacterial species. This condition clinically and histopathologically resembles with that of mycetoma and Actinomycosis. *Method:* A 51 year old male presented to us with swelling over medial aspect of the right foot with multiple sinuses. He gave a history of trauma 3 years back at the same site. The sample was examined directly by KOH preparation and grams stain. The culture was put up on blood, chocolate, lowenstein Jensen (LJ) and sabouraud dextrose agar (SDA) media. Fungal culture was negative. *Result: Staphylococcus aureus* was isolated in aerobic culture. *Conclusion:* the patient with botryomycosis caused by S*taphylococcus aureus* was subsequently treated with antibiotics and he recovered completely.

Introduction

Mycetoma is a slowly progressive chronic granulomatous infection of the skin and subcutaneous tissues, which includes 2 categories namely eumycetoma caused by fungi and actinomycetoma caused by higher bacteria of class actinomycetes. Botryomycosis is a bacterial infection which clinically mimics mycetoma. The eumycetes accounts for about 40%, actinomycetes for 60% of mycetoma in the world. Botryomycosis is a rare entity characterised by chronic granulomatous reaction to the bacterial infection. The nomenclature is a misnomer as it is caused by true bacteria and not by fungus.

Case History

Fig: Swelling with multiple discharging sinuses over the medial aspect of right foot.



A 51 year old farmer by occupation came with complaint of swelling over right foot since 3 months. He developed a small swelling over inner aspect of right foot. It then gradually increased in size with multiple sinuses with a serosanguinous discharge. He also gave past history of trauma 3 years back at the same site. There was no history of diabetes mellitus, tuberculosis and immunosupression. On examination pedal oedema was present,pitting type over the right foot. Right inguinal lymphadenopathy was present. Local examination showed nodular swelling over the medial aspect of the right foot with multiple sinuses discharging serosanguinous fluid with absence of granules.

Microbiological investigations: The discharge with absence of granules was collected. It was subjected for KOH preparation which showed no fungal elements. On grams staining pus cells and gram positive cocci were seen. It was put up for aerobic and anaerobic culture. Aerobic culture on blood agar showed golden brown beta haemolytic colonies and mac Conkey agar showed small circular lactose fermenting colonies. On nutrient agar large circular golden brown colonies are seen. Anaerobic culture showed no growth even after 3 weeks. Sabouraud dextrose agar showed no fungal growth. *Staphylococcus aureus* was identified with set of biochemical reactions as described by Mackie and Mc cartney [1]. The sample was repeated for confirmation. Patient was treated with gentamycin as per the sensitivity pattern with good response and there was clinical improvement with swelling subsided.

Discussion

Cutaneous botryomycosis is a rare disease,scarcely described in the international literature [2]. The main differential diagnosis of botryomycosis are exogenous actinomycosis and eumycetoma which clinically present enlarged affected area, Fistulas and drainage of granules differing as to etiology, location and consistency of the lesions [2-3]. The majority of patients of botryomycosis do not have predisposing pathological conditions such as diabetes mellitus, chronic mucocutaneous candidiasis with T-cell dysfunction, systemic corticosteroid theraphy and transient T-cell impairment [4]. However in the present case local trauma was predisposing factor. Botryomycosis is rarely reported as evident from the paucity of related literature [5-7]. *Staphylococcus aureus* is frequently isolated from such cases. The patient showed speedy recovery with appropriate antibiotic treatment. Hence the aetiological diagnosis is important for the management of such cases.

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