International Journal of Scientific Reports
Eswari L et al. Int J Sci Rep. 2015 Jun;1(2):139-140
http://www.sci-rep.com
pISSN 2454-2156 | eISSN 2454-2164

DOI: http://dx.doi.org/10.18203/issn.2454-2156.IntJSciRep20150223

Case Report

Botryomycosis: a case report

Eswari L*, Revathi TN

Department of Dermatology, Victoria Hospital, Bangalore Medical College, Bangalore, Karnataka, India

Received: 23 May 2015
Accepted: 25 June 2015

***Correspondence:**
Dr. Eswari L
E-mail: eshwaril@yahoo.com

ABSTRACT

Botryomycosis arises from chronic infections produced by low-virulence organisms in an altered host environment. Staphylococci have been the most common organisms implicated, but various other bacteria have also been identified in human botryomycosis lesions. Here is a case report of a male diabetic patient with botryomycosis on the gluteal region with E. coli as the causative organism.

Keywords: Botryomycosis, Staphylococcus aureus, Discharging sinuses

INTRODUCTION

The term "botryomycosis" was previously synonomous with granular bacteriosis, staphylococcal actinophytosis and bacterial pseudomycosis. Winslow summarized the literature in 1959 and subcategorized botryomycosis into integumental and visceral forms. The integumental form is more common and is characterized by localized granulomatous skin infections often associated with trauma, a foreign body or chronic wound contamination.[1]

The diagnosis of botryomycosis is one that is often easily overlooked because it can be confused with other mycetomas such as actinomycosis and nocardosis.[2]

CASE REPORT

A 36 year old male, tailor by occupation, presented with multiple discharging sinuses on both the gluteal regions which was present since 6 months. Initially it started as a single painful nodular lesion spontaneously with no history of preceding trauma, for which he took treatment from a local doctor.

The pain subsided but he started developing gradually multiple such lesion in the surrounding area. The nodules later on ruptured and developed into discharging sinuses. He used to get constitutional symptoms like fever and malaise intermittently.

Cutaneous examination revealed multiple indurated tender nodular lesions with discharging sinuses over both the gluteal region. Routine culture from the discharge and biopsy tissue showed growth of Escherichia coli which was sensitive to most routinely used antibiotics. ZN stain for AFB was negative; KOH preparation and fungal culture were negative for fungal elements. Histopathological examination of the biopsy specimen showed chronic granulomatous inflammation. Routine hematological and urine investigations were unremarkable except for high blood sugar levels. ELISA for HIV1&2 was negative. X-ray of the pelvis was normal.

The patient responded to ciprofloxacin and oral hypoglycemics with good results without any surgical intervention.

Figure 1: Botryomycosis clinical picture.

DISCUSSION

The disease, later referred to as botryomycosis, was first described involving the lung of a horse by Bollinger in 1870.[3] He reported the presence of multiple fibrous nodules resembling those of actinomycosis. After further study, he renamed the disease botryomycosis in 1887 ("botryose" from Greek for bunch of grapes).

Botryomycosis is best considered a reactive process initiated by low-grade bacterial infections. The lesions are generally indurated fibrotic masses that may form draining sinuses and fistulae. Microscopic examination of haematoxylin-eosin-stained specimens shows chronic suppurative and granulomatous inflammation with giant cells, epithelioid macrophages and scattered microabscesses. There is marked fibrosis and desmoplasia of the connective tissue.[4] Within the areas of purulent inflammation are characteristic grains, the size of fine sand particles, which have been referred to as Bollinger's granules.[5] On gross examination, Bollinger's granules are indistinguishable from the sulfur granules of actinomycosis and nocardiosis. Gram and Giemsa stains can be used to identify the causative bacterial organisms within the granules. The granules are surrounded by an amorphous, eosinophilic, refringent matrix called the Splendore-Hoeppli phenomenon.[2]

Staphylococcus aureus causes the majority of infections, followed by Pseudomonas aeruginosa and a number of other bacteria, including Actinobacillus lignieresii, Escherichia coli, Proteus species, and several anaerobic bacteria including Streptococcus intermedius. The relative balance between the host's resistance and the microorganism's virulence may be altered in some way that perpetuates the growth of the lesion in a symbiotic fashion. Local host defences may be compromised by postoperative wound infections, tetanus, osteomyelitis, follicular mucinosis or foreign bodies.[2]

Botryomycosis has been associated with immune-compromised individuals with diabetes mellitus, chronic corticosteroid therapy, chronic granulomatous disease, recurrent mucocutaneous candidiasis, Acquired Immune Deficiency Syndrome (AIDS) and severe malnutrition. Most individuals with botryomycosis have normal humoral and cellular immunity.[2]

There are very few literature and case reports on this subject and this patient had diabetes mellitus as a predisposing factor with E. coli being the causative organism.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. Winslow DJ. Botryomycosis. Am J Pathol. 1959;35:153-67.
2. Sivaraj S, Muthu Sekhar MR, Baig MF. Micrococcal botryomycosis of the left temporal region. Indian J Dent Res. 2007;18:131-4.
3. Bollinger O. Mycosis der lunge beim pferde. Virchows arch (PA). 1870;49:586.
4. Binford CH, Dooley JR. Diseases caused by fungi and actinomycetes. In: Binford CH, Connor DH, eds. Pathology of Tropical and Extraordinary Disease. Washington, DC: Armed Forces Institute of Pathology; 1976: 561.
5. Harman RR, English MP, Halford M, Saihan EM, Greenham LW. Botryomycosis: a complication of extensive follicular mucinosis. Br J Dermatol. 1980;102:215-22.

Cite this article as: Eswari L, Revathi TN. Botryomycosis: a case report. Int J Sci Rep 2015;1(2):139-40.