

## A Rare Presentation of Cutaneous Botryomycosis: - A Case Report



### Medical Science

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### ABSTRACT

*Cutaneous Botryomycosis is a rare chronic focal infection, characterised by granulomatous inflammatory response to bacterial pathogens such as Staphylococcus aureus and less commonly Pseudomonas spp, Escherichia Coli, Proteus spp, Streptococcus spp. It mainly involves the skin and rarely viscera.*

*We report a case of a 35 year old man who presented with polymicrobial botryomycosis with multiple chronic skin lesions over the left scapular region. Surgical debridement and culture revealed staph aureus and pseudomonas, sensitive to Minocyclin. Patient was put on oral antimicrobial therapy and showed definitive resolution with Minocyclin on follow up.*

### Introduction:-

The word "Botryo" is derived from the Greek word "Botrois" meaning "bunch of grapes" (due to the microscopic appearance of granular bodies). The nomenclature is a misnomer as it is caused by true bacteria and not by fungus (mycos=fungus) as supposed in the past. The disease was originally discovered by Otto Bollinger in 1870 and its name was coined by Sebastiano Rivolta in 1884<sup>(1)</sup>. In 1919, the bacterial origin of the infection was discovered. It is also known as Actinophytosis, bacterial pseudomycosis or pyoderma vegetans.<sup>(2)</sup> It is a rare, chronic bacterial granulomatous disease which presents with suppurative, granulomatous skin lesions, rarely also involving the viscera. The most common causative bacteria is *staph aureus*.

### Case report:-

A 35 years old male patient presented with erythematous, fluctuant skin lesions of 2 years duration, located over the left scapular region. There was no history of trauma preceding the lesions. Most of the lesions were granulomatous, indurated and discharging purulent material (fig -1). Systemic examination did not reveal anything significant and routine investigations did not suggest any immune suppression or diabetes mellitus. X ray scapula was normal. Incision biopsy was taken from the sinus openings and pus was sent for bacterial and fungal culture. Both failed to identify any significant microorganisms. Patient underwent excision with thorough debridement of the whole area. Surgical specimen (fig-2) was again sent for culture and sensitivity (fig-3), which revealed isolation of *staphylococcus aureus* and *Pseudomonas*, ascertaining a diagnosis of cutaneous Botryomycosis.

As per sensitivity report, organisms were found sensitive to Minocyclin and the patient was started on oral Minocyclin 200 mg/ day. No topical treatment was advised.

On 2 month follow up, patient showed marked improvement with this treatment with resolution of most of the discharging sinuses and no fresh occurrence of lesions (fig 3 & 4)

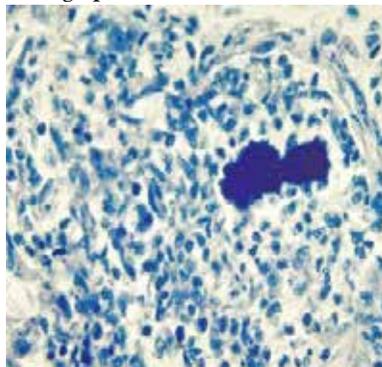
**Photograph-1**



**Photograph-2**



**Photograph-3**



Photograph-4



Photograph-5



**Discussion:** Botryomycosis is a unique, chronic, bacterial, granulomatous opportunistic infection of the skin, subcutaneous tissue and rarely the viscera<sup>(3)</sup>. It is relatively unknown and occurs among immunocompromised patients. There are two forms of the disease-Cutaneous or integumentary (including muscles and bones) and general. Visceral presentation is usually with pulmonary involvement<sup>(4)</sup> which is associated with cystic fibrosis, although involvements of other organs like brain, kidney, spleen and liver has also been described. Pathogenesis is not well understood, but probably reflects an imbalance between the numbers of micro organisms inoculated, the virulence of organisms and predisposing factors (Trauma, DM and Alcoholism). The most common causative organism is *staphylococcus aureus*, although *Pseudomonas* spp, *E.coli*, Alpha haemolytic and non haemolytic *streptococcus*, *proteus spp* and other anaerobes have also been reported.

Multi bacterial aetiology of Botryomycosis in a single patient is rarely detected (as in our patient). Moreover, occurrence in the back (scapular region) is quite rare in comparison to extremities as reported by various authors<sup>(5,6)</sup>.

Main differential diagnosis of Botryomycosis are exogenous *actinomycosis* and *enmycetoma*, which clinically presents enlarged affected area, with fistulas and drainage of granules, differing in regard to aetiology, location and consistency of lesion<sup>(7)</sup>. This case has been presented due to its rarity, unusual site of involvement and multi bacterial aetiology.

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