

Botryomycosis – A rare case report

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Abstract Botryomycosis also known as bacterial pseudomycosis is a rare chronic bacterial granulomatous disease that usually involves skin and rarely the viscera. *Staphylococcus aureus* is the most common etiological agent, however other species like *Pseudomonas aeruginosa*, *Escherichia coli*, *Proteus vulgaris*, *Bacteroides*, *Actinobacillus* sp. may also cause the disease. The clinical picture of botryomycosis closely resembles scrofuloderma, mycetoma or actinomycosis. Henceforth, proper diagnosis with appropriate treatment is thus needed.

Key words

Botryomycosis, granulomatous, *Staphylococcus aureus*.

Introduction

The name Botryomycosis refers to Greek word *botrye* meaning grapes; grape-like granules and Greek word *mykes* meaning fungus; mistakenly implied to fungaetiology.¹ It was originally discovered by Otto Bollinger in 1870, and its name was coined by Sebastiano Rivolta in 1884. In 1919 the bacterial origin of the infection was discovered. On reviewing the Indian literature, very few cases of botryomycosis have been documented. Herein, we here report a case of botryomycosis which progressed slowly but responded very well to antibiotics.

Case report

A 33-year-old farmer presented with multiple painful nodular lesions with draining sinuses, most of which had foul smelling discharge. Such lesions were present over his left upper chest and left shoulder including upper 2/3rd of his arm for last 2 years (Figure 1 and 2). He gave a history of preceding trauma. The lesion started as

papule over left upper chest which gradually developed into a nodular swelling, increased in size, and formed a discharging sinus. Later slowly, in few months many more nodules and discharging sinuses appeared around this lesion. There was no history of any chronic illness in the past.

On local examination, the left shoulder region was swollen with numerous elevated, well-demarcated, small and large nodular lesions and many discharging sinuses were present. Most of the sinus openings were inflamed and blocked with dried pus (some with oozing lesions). Tenderness was present. Discharge was yellowish, purulent and foul smelling. Routine hematological and urine examinations were normal. HIV and RPR tests were nonreactive. Radiological study of chest and left shoulder joint did not reveal any abnormality in the bones. Pus when soaked with normal saline dressings did not show any granules. Culture on blood agar showed abundant growth of golden-yellow colonies of staphylococcus (Figure 3). Gram stain, positive catalase test and mannitol fermentation test confirmed it to be *Staphylococcus aureus*. Other tests like Ziehl-Neelsen stain, KOH mount and fungal cultures

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Figure 1 Multiple nodules with pus discharging sinuses present over upper left chest and left shoulder region.

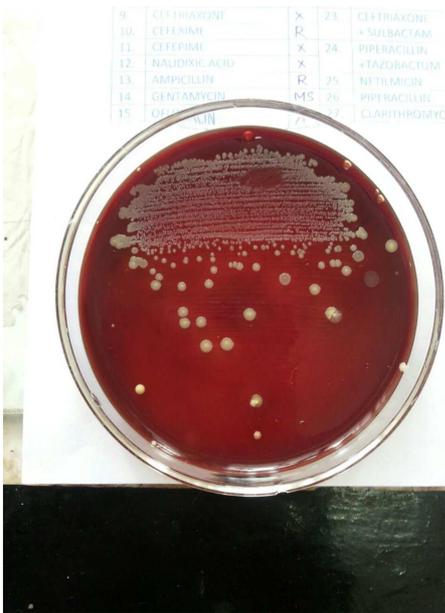


Figure 3 Blood-agar culture shows large, round golden-yellow colonies of *Staphylococcus aureus*.



Figure 5 Resolving lesions of botryomycosis after one-month treatment with piperacillin-tazobactam and gentamicin.



Figure 2 Multiple nodules with pus discharging sinuses present over left shoulder region and upper arm.



Figure 4 Resolving lesions of botryomycosis after one-month treatment with piperacillin-tazobactam and gentamicin.

were negative. Biopsy was done which was consistent with the findings of botryomycosis.

Pus was found to be sensitive for gentamycin, amikacin, ceftriaxone and piperacillin-tazobactam but resistant to ciprofloxacin, cefixime and ampicillin. The patient responded very well to piperacillin-tazobactam and gentamicin with significant reduction in swelling and decrease in number of nodules in a month time (Figure 4 and 5). The patient was regularly followed up.

Discussion

Botryomycosis may present as two forms. Primary cutaneous form accounts 75% of the cases; while the visceral form which rarely occurs, mainly affects the lung.² Being a farmer by occupation, there was significant history of preceding trauma. Diabetes mellitus and HIV infection could also be other predisposing factors.^{3,4} The clinical picture of botryomycosis closely resembles other diseases causing fistula; such as scrofuloderma, actinomycosis, actinomycetoma, eumycetoma and atypical mycobacterial infections. Proper evaluation of the disease with its etiological factors is, henceforth needed. Appropriate antibiotics after culture sensitivity tests and sometimes surgical resection always give promising results.

Conclusion

Botryomycosis is a rare pyogenic disease with polymicrobial etiology; *Staphylococcus aureus* is the most commonest one.^{5,6} The disease responded very well to antibiotics without surgical intervention. We reported this case for its rare incidence and probably the first to be seen in Jharkhand state.

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