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FACIAL BOTRYOMYCOSIS IN YOUNG FEMALE

Dermatology

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ABSTRACT

Botryomycosis is a chronic suppurative infection characterized by a granulomatous inflammatory response to bacterial pathogens in skin and other organs. We here report a case of 25 year old female with Botryomycosis due to Methicillin resistant Staphylococcus aureus after trauma. Splendore–Hoeppli phenomenon was seen on biopsy. Some resolution was seen on starting doxycycline and linezolid, later clindamycin and doxycycline was given based on culture report. The lesions cleared with no recurrence in year follow up.

KEYWORDS

Botryomycosis, Staphylococcus aureus, Splendore–Hoeppli phenomenon

INTRODUCTION:

Botryomycosis is a rare and uncommon bacterial granulomatous disease that usually involves skin and rarely viscera,[1] and is mostly reported in immunocompromised adults. The common etiological agent is Staphylococcus aureus and others include Streptococcus spp, Pseudomonas spp., Escherichia coli and Proteus spp.[2] Approximately 200 patients have been reported in English literature so far. Other terms used to describe botryomycosis include bacterial pseudomycosis, staphylococcal actinophytosis, granular bacteriosis, and actinobacillosis.

CASE REPORT:

A 25-year young female presented to the dermatology outpatient department with swellings over forehead for 2 months. She had a history of trauma over her forehead 3 months ago due to road traffic accident. Local examination findings revealed multiple fleshy, lobulated, tender swellings over middle and right part of forehead and also above right eye with pustular crust on some lesions (Figure 1). Vital signs were normal and systemic examination findings were also within the normal limits.

There were no signs and symptoms suggesting a state of immunosuppression in the patient. Also, routine investigations were within normal limit & HIV report was negative. X ray skull and chest did not show any abnormality. Pus culture showed Methicillin resistant Staphylococcus aureus (MRSA) sensitive to linezolid & doxycycline. KOH and fungal culture of the discharge did not reveal any organism.

Biopsy of the nodule showed bacterial granules in dermis with an eosinophilic rim at the periphery suggestive of Splendore–Hoeppli phenomenon (Figure 3).

Based on clinical, microbiological and histopathological findings, the diagnosis of botryomycosis was made. We started the patient on Injection Linezolid 600mg 12 hourly for 14 days and Cap doxycycline 100mg twice daily. With a repeat pus culture report, the patient was given Tab Clindamycin 150mg QID for 2 months along with doxycycline. The lesions cleared slowly with the course of treatment given (Figure 2). The patient had a regular follow up for one year with no episode of recurrence.

Figure 1: Front and lateral view at start of treatment (original)

Figure 2: Front And Lateral View After Completion Of Treatment (original)

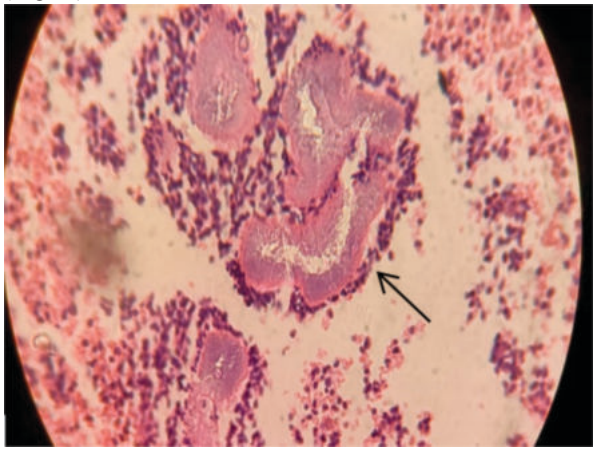

Figure 3: Hematoxylin and Eosin staining of the nodule showing bacterial granules with an eosinophilic rim at the periphery (black arrow) suggestive of Splendore–Hoeppli phenomenon (Magnification 40x) (original)

DISCUSSION:

Botryomycosis can be cutaneous as well as visceral. Cutaneous lesion account for 3/4th whereas rest is visceral form. The cutaneous form occurs following inoculation of the bacteria after trauma, surgery.[3] Mostly, the lesions develop slowly in the form of subcutaneous nodules but verrucous lesions or non-healing ulcers with draining sinuses or fistula formation can also be seen. The purulent discharge from the lesions may contain small yellowish “grains” resembling sulfur granules. The visceral form is more likely to occur in patients who are immunocompromised. It occurs most commonly in the lungs,[4] but other organs can also be involved like liver, spleen, kidney and brain. Common causative organisms include Staphylococcus

aureus, Pseudomonas aeruginosa. Less common organisms known to cause the disease are coagulase-negative staphylococci, Streptococcus spp., Escherichia coli and Proteus spp. The common associations are Diabetes mellitus, HIV, alcoholism, cystic fibrosis, chronic granulomatous disease. Head and neck involvement are rare in comparison to the extremities. The differential diagnosis includes eumycetoma and actinomycosis which can be ruled out on the basis of morphology, area of involvement and biopsy.[5]

The histopathological finding of Splendore–Hoeppli phenomenon represents presence of an antigen–antibody complex, tissue debris and fibrin that generate an eosinophilic matrix among bacterial granules in botryomycosis. It prevents phagocytosis and intracellular destruction of the bacteria leading to chronic infection and thereby requires prolonged treatment.

This case has been reported due to its rarity, site of involvement and remarkable response to clindamycin and doxycycline.

REFERENCES:

1. Bacterial infections. In: James WD, Berger TG, Elston DM, editors. Andrews' diseases of the skin: Clinical dermatology, 11th ed. Elsevier; 2011. p. 250
2. Bonifaz A, Carrasco E. Botryomycosis. Int J Dermatol 1996;35:381-8. [PUBMED]
3. Devi B, Behera B, Dash M, Puhan M, Pattnaik S, Patro S. Botryomycosis. Indian J Dermatol. 2013 Sep;58(5):406. doi: 10.4103/0019-5154.117322. PMID: 24082199; PMCID: PMC3778794.
4. Motswaledi H, Makama JZ, Khan N. Botryomycosis: A case report. SA Journal of Radiology 2006;10:14-5.
5. Coelho WS, Diniz LM, Souza Filho JB. Cutaneous botryomycosis - Case report. An Bras Dermatol. 2009;84:396-9. [PUBMED]