BOTRYOMYCOSIS

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Three cases (two male, one female) of botryomycosis are reported. All were adults and had no predisposing factors or immunosuppression. Staphylococcus, Pesudomonas and E coli were grown on bacterial culture. Patients were treated with antibiotics based on the sensitivity pattern with fairly good response. No systemic involvement was present in any case.

Key Words: Botryomycosis, Staph aureus, Pseudomonas, E coli

Introduction

Botryomycosis is a rare entity characterised by chronic granulomatous reaction to bacterial infection. The word "botryo" is derived from Greek "Botrys" meaning "a bunch of grapes". The nomenclature is a misnomer as it is caused by true bacteria and not by fungus. Lesions are characterised by tumefaction, deformity, multiple sinus formation and fistulous tracts with deep abscesses and ulcerated areas of the skin. Common organisms include Staphylococcus, Pseudomonas, Escherichia coli, Proteus and Streptococcus species.

Case Reports

Case 1: A 35-year old man presented with history of multiple skin lesions on the right side of the abdominal wall, pubic area and right inguinal area for 2 years. He did not suffer from diabetes mellitus or from any other disease with immunosuppression. The onset was a 'boil like' lesion over the abdominal wall which progressed slowly to its present extent. There was history of occasional discharge of yellowish coloured grains. Patient had multiple excisions and antifungal treatment elsewhere. Cutaneous examination showed nodulo-cystic masses and discharging lesions over the right side of the abdominal wall, pubic area, right inguinal area, root of penis and the scrotum (Fig.1). No grains could be seen.

Fig. 1. Noduloulcerative tumefaction.

Regional lymph nodes were enlarged. Skin biopsy tissue revealed features of botryomycosis on Gram staining. Stains and culture for fungal infection were negative. Biopsy tissue grew Staphylococcus aureus and Pseudomonas aeruginosa. He was treated with gentamicin and ciprofloxacin as per the sensitivity pattern with good response. Excision was not possible because of the large area involved.

Case 2: A 25- year old man presented with history of skin lesions over the right thigh and gluteal area for 4 years. There was no

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history of trauma, diabetes mellitus or any other disease with immunosuppression. There was no history of discharge of grains. Patient had multiple excisions with subsequent recurrences. Skin examination revealed nodulo-cystic discharging lesions with induration and tenderness over the right gluteal area and right thigh on its posteriomedial surface. Marked difference in circumference of the thighs was observed, the involved side being greater. X-rays of the pelvis showed rounded osteolytic lesions of the right iliac bone.

Histopathology showed characteristic features of botryomycosis on Gram staining. Fungal stains were negative. Culture grew E coli with sensitivity to gentamicin and cephalexin. He was treated with both drugs with complete clinical resolution.

Case 3: A 37-year old woman presented with history of discharging skin lesions over both gluteal areas and perineal area for 9 years. There was no history suggestive of any disease with immunosuppression or diabetes mellitus. Local examination showed nodulo-cystic discharging indurated lesions over both gluteal and perineal areas. Histopathology showed features of botryomycosis. Tissue culture grew Pseudomonas aeruginosa sensitive to gentamicin and ciprofloxacin. Fungal cultures were negative and so were the special stains for fungi. Patient was given gentamicin and ciprofloxacin. The patient showed excellent response. However, she was lost to follow up after 2 months of treatment.

Discussion

Primary cutaneous form of botryomycosis is more common than its pulmonary form which is associated with cystic fibrosis and reaches the skin forming sinuses and irregular masses.[1]

Majority of the patients of the cutaneous form have no predisposing factors like diabetes, postsurgical lacerations of skin, chronic mucocutaneous candidiasis, T-cell abnormality or steroid therapy.[2] History of local trauma must be enquired and deep fungal infection must be ruled out as both conditions present with similar clinical features. Treatment necessitates prolonged course of antibiotics and the choice is determined by tissue culture and sensitivity pattern. Surgical excision is helpful in smaller lesions only. Medical treatment is complicated by lack of adequate penetration of antibiotics in the sequestered grains and granuloma. There is paucity of literature on this subject with few case reports.[3,4]

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