

Primary cutaneous actinomycosis over right gluteal region

Sir,

A 32-year-old woman presented with a slowly growing painless skin lesion of nine years duration over her right upper thigh and buttock. There was itching and discharge from lesion. There was no past history of trauma or surgery at the site, fever, oro-dental, abdominal, or bony pain, weight loss, bowel complaints, cough, or chest pain. There was no history of diabetes, tuberculosis, or use of any intrauterine contraceptive device (IUCD). She had been treated with various oral antibiotics in the past with little or no improvement. On examination, there were multiple, grouped, hyperpigmented nodules discharging pus; a few were crusted with multiple sinuses, induration, and puckering of the surrounding skin [Figure 1]. There was no inguinal lymphadenopathy. Routine investigations were within normal limits. The tuberculin skin test showed no reaction. The Venereal Disease Research Laboratory test was non reactive; human immunodeficiency virus test (HIV) was negative. Chest radiography and ultrasonography of the abdomen and pelvis were normal. We considered actinomycosis and cutaneous tuberculosis in the differential diagnosis and proceeded to perform a skin biopsy. Histopathology revealed an unremarkable epidermis with dense infiltration of the underlying dermis with neutrophils, eosinophils, lymphocytes, and plasma cells. A small dermal focus of filamentous bacteria was noted with a surrounding inflammatory infiltrate that was suggestive of actinomycosis [Figure 2]. PAS stain showed presence of bacterial colonies. Culture could not be done as the patient was poor and could not afford the investigation. She was managed with oral cotrimoxazole and amoxicillin (500 mg) twice daily for two months. She improved clinically with closure of sinuses



Figure 1: Multiple hyperpigmented, clustered nodules with discharging sinuses with pus, induration, and puckering of the surrounding skin over the right gluteal region

and cessation of discharge [Figure 3]. The patient is presently under follow up.

Actinomycosis is a chronic, suppurative granulomatous disease caused by endogenous, anaerobic or microaerophilic, gram-positive non-spore-forming bacteria of the families Actinomycetaceae and Propionibacteriaceae that normally colonise the mouth, colon, and urogenital tract.^[1] It has no predilection for age, race, season, or occupation and is seen commonly in tropical countries. It has been noted in patients with diabetes, HIV, leukemia, cancer chemotherapy, or even without any immunosuppression.^[2] It is characterized by chronic and progressive suppurative inflammation, commonly seen on the neck, thorax, and abdomen. Five main clinical types are cervicofacial (60%), thoracic (20%), abdominal (15%), pelvic, and primary cutaneous,^[3] the last being rare and having a variable presentation.

Minor trauma due to thick grass, thorn prick, or contact with human feces, have been implicated.^[4] However, several cases show no discernible history of injury, occupational contact, or any exogenous focus of infection. The previous male preponderance is now overshadowed by an increasing number of females being infected, as it is associated with long-term use of intrauterine devices.

Perianal and gluteal actinomycosis has been reported from various parts of the world, including India, along with rectal or abdominal actinomycosis.^[5]

Three cases of primary gluteal actinomycosis have been reported in males^[4,6] without any other part of the body being affected. Das *et al.*^[7] have reported a similar case of a 19-year-old female with no systemic involvement or use of IUCD. Important conditions leading to multiple discharging sinuses in the Indian scenario include actinomycotic mycetoma, hidradenitis suppurativa, tuberculosis, and actinomycosis [Table 1]. Botryomycosis, syphilitic gummata, osteomyelitis, cutaneous cryptococcosis, in addition to surgical causes such as inflammatory bowel disease and fistula-in-ano are other causes of discharging sinuses.

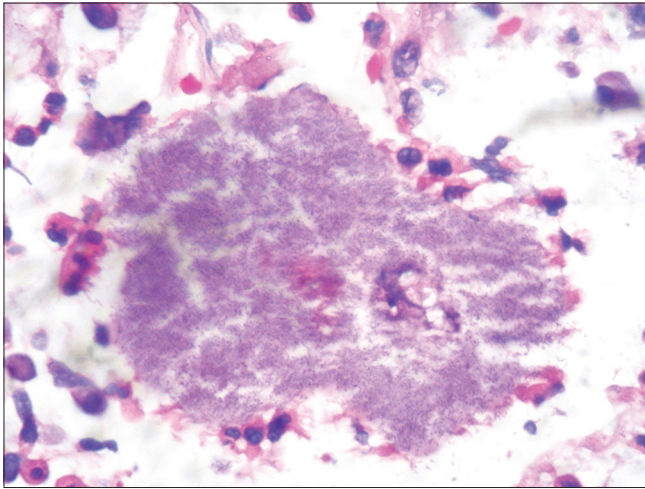


Figure 2: Small focus filamentous bacteria in the dermis surrounded by an inflammatory infiltrate H and E stain (X40)



Figure 3: After two months of therapy

Table 1: Differentiating features of common discharging conditions

Parameter	Actinomycetoma	Tuberculosis (scrofuloderma)	Actinomycosis	Hidradenitis suppurativa
Age	21-40 years	Any age	Any age	Puberty
Cause	Exogenous inoculation following trauma	Extension of underlying infection from lymph nodes or bones	Endogenous infection associated with dental procedures, intrauterine devices, dental procedures, abdominal injury	Follicular occlusion with secondary involvement of apocrine glands
Site	Foot	Cervical region	Cervicofacial, thoracic, abdominal	Apocrine-bearing areas commonly
Clinical features	Localized painless swellings with multiple sinuses discharging granules (red), which can later be painful if bones are involved or in case of secondary bacterial infection	Linear discharging sinuses usually less than five in number	Multiple sulphur discharging sinuses	Blind, painful boil that ruptures to form draining sinuses, which heal with band-like scarring Presence of polymorphic comedones is a useful sign Regional lymph nodes are usually affected
Histopathology	Suppurative granuloma formation with fine branching, interlacing filaments	Caseation necrosis with tuberculous granuloma	Granulomatous suppuration with demonstration of ray fungus	Involvement of apocrine and eccrine glands with sinus tract formation
Diagnosis	Clinical presentation, Gram's stain, histopathology	Clinical presentation, erythrocyte sedimentation rate, tuberculin test, histopathology and tubercle bacilli	Clinical presentation, Gram stain, histopathology	Clinical presentation erythrocyte sedimentation rate, leukocytosis
Treatment	Higher antibiotics Sulfonamides Minocycline Amoxiclav	Antitubercular therapy	Penicillin is the drug of choice; erythromycin, amoxicillin, doxycycline, clindamycin	Oral antibiotics, oral steroids, oral retinoids, and antiandrogens; incision and drainage

The histological picture is one of suppurative inflammation with abscesses and pus-filled sinus tracts in which bacteria form typical granular colonies composed of radiating gram-positive filaments. Diagnosis is based on identification of sulphur granules in the pus, histological findings, and positive culture. It is a fastidious organism that is rarely cultured from the clinical specimen. Crystalline penicillin is the drug of choice but response is usually slow due to fibrosis. Surgery may be planned for such cases. Actinomycosis is a challenge to any clinician and increased awareness among practitioners is required with a high degree of suspicion to diagnose this medically treatable condition as early as possible.

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Conflicts of interest

There are no conflicts of interest.

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