Case report

Extragenital donovanosis of the foot

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An extremely rare case of primary extragenital donovanosis affecting the dorsa of right foot is reported. Clinical and histopathological features of the disease are described and the rarity, absence of genital lesions, and consequent difficulty in diagnosis are discussed.
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Introduction

Donovanosis is a chronic, slowly progressive, granulomatous, locally invasive disease caused by the Gram negative bacterium *Calymmatobacterium (Donovania) granulomatis*. It usually affects the genital, perineal, and perianal regions.[1] Extragenital donovanosis in association with primary lesions in genitalia, groin, or anal region has been reported by a number of workers, but there are very few reports of primary extragenital involvement.[2] Hence, we report such a case of extragenital donovanosis involving right foot.

Case report

A 24 year old unmarried man presented with ulcers of 6 months' duration over the right foot. At first, the lesions appeared as small nodules over the lateral aspect of the right foot which became ulcerated after 2 weeks. Subsequently, more ulcers appeared at about 2 months. These ulcers were painful. There was no history of preceding trauma. The patient gave a history of heterosexual genitogenital contact 1 year earlier. The sexual partner was not traceable. However, there was no history of genital sores.

On examination, there were seven ulcers over the right foot involving its dorsal, lateral, and medial aspects (fig 1). These ulcers were round to oval in shape, measuring 1 × 1 cm to 4 × 3 cm in size having beefy red exuberant granulation tissue, bleeding on touch, and mildly tender without any underlying induration. The surrounding skin showed hyperpigmentation. There was no evidence of vascular insufficiency or varicose veins. He had ipsilateral inguinal and femoral lymphadenopathy. The lymph nodes were discrete, mobile, non-tender, firm in consistency, and were 1–2 cm in size each.

The haemogram revealed a raised erythrocyte sedimentation rate (21 mm in the first hour). Blood sugar, liver and renal function tests, and chest radiograph were within normal limits. The Mantoux test was negative. VDRL and HIV serology were non-reactive. Fungal and acid fast bacilli cultures were negative. Histopathological examination of the ulcer revealed granulation tissue containing a mixed infiltrate of histiocytes, plasma cells, and neutrophils. A radiograph of the right foot showed periosteal reaction of the shaft of the fifth metatarsal bone. Finally, a tissue smear was taken which when stained with Leishman's stain showed the characteristic intracytoplasmic Donovan bodies within the histiocytes clinching the diagnosis of donovanosis (fig 2).

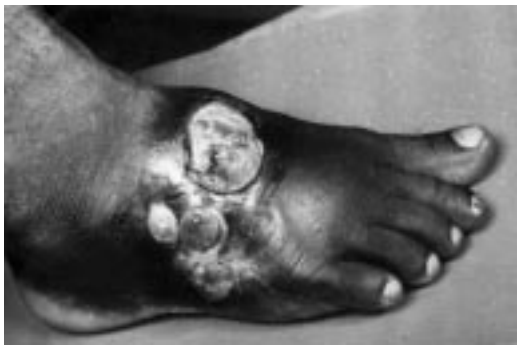

Figure 1 Multiple ulcers on the dorsum of the right foot with exuberant granulation tissue.

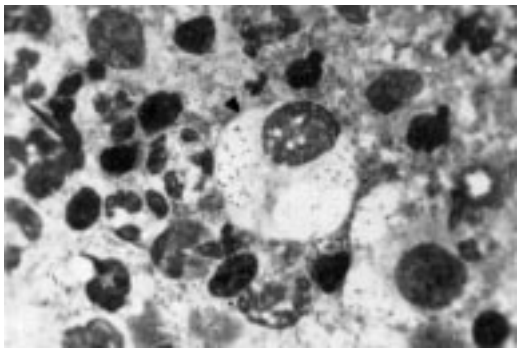

Figure 2 Photomicrograph of tissue smear, showing a large mononuclear cell with eccentric nucleus and vacuolated cytoplasm containing Donovan bodies (10 × 100).

The patient responded favourably to the prolonged administration of co-trimoxazole. At the end of 3 months, the ulcers had healed completely.

Discussion

When this patient presented, several differential diagnoses including mycetoma, chromomycosis, actinomycosis, osteomyelitis, tuberculosis, ulcerated genital warts, syphilis, yaws, varicose ulcer, pyoderma gangrenosum, basal cell carcinoma, and squamous cell carcinoma were considered. However, histopathological examination of the biopsy specimen excluded these conditions and the tissue smear confirmed the diagnosis of donovanosis, which was

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not suspected earlier. Though the chronic and exuberant granulomatous ulcers resembled donovanosis, the absence of genital ulcers and the extremely unusual site of involvement led to the difficulty in the clinical diagnosis. Another remarkable feature of donovanosis is that despite its extent, lymphadenopathy is minimal or absent, the patient's general health is good, and the lesions are comparatively painless,[3] as in our case.

Donovanosis is endemic along the eastern seaboard of India in the states of Andhra Pradesh, Mysore, and Tamil Nadu, probably due to constant high temperature throughout the year and relative humidity.[4] Our institute which is situated in Pondicherry, an enclave in Tamil Nadu, caters to the needs of Pondicherry and adjoining districts of Tamil Nadu. Approximately 1000 patients visit the STD clinic of this hospital in a year and 8% of them have donovanosis.[5] Donovanosis involves genitalia in 90% of the cases, the inguinal region in 10%, the anal region in 5–10%, and distant sites in 1–5%. In a large series, extragenital lesions have been reported in up to 6% of the cases.[3] In the literature, various extragenital sites described include the oral cavity, bones, joints, liver, thorax, lung, and spleen.[2] Other than extragenital mucocutaneous sites, metastatic lesions of donovanosis of bones have been frequently reported. Kirkpatrick[6] in a review of literature, found 11 other reports of bone lesions of donovanosis. All these cases except one, were female with lesions on the cervix and could easily be mistaken for malignancy of the cervix with metastases. These metastatic bone lesions are destructive, osteolytic, very tender, and painful fusiform swellings. The ulcers over the foot in our patients were mildly tender with radiological changes of periostitis, hence, the possibility of haematogenous transmission from a hidden asymptomatic urethral lesion was not considered.

Extragenital presentation of donovanosis could be due to contiguous spread from the genital region into adjacent pelvic organs, by lymphatic spread, by blood borne dissemination, or by autoinoculation to remote skin sites.[1 3] In our case, the presence of lesions over the foot can be explained by exogenous inoculation probably following local trauma.

To conclude, donovanosis may be considered in the differential diagnosis of foot ulcers when diagnosis is obscure.

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