Donovanosis in a human immunodeficiency virus-positive female

Sir,

Donovanosis or granuloma inguinale is a mildly infectious, progressive ulceration of the genital area caused by the Gram-negative bacillus, *Klebsiella granulomatis*. Human immunodeficiency virus (HIV) infection alters the clinical picture of the disease and prolongs healing time. We discuss a case of donovanosis which was found to be HIV positive, a rare presentation in North India in current times, and also discuss the difficulties in therapy of such cases.

A 32-year-old married female presented to us with a nonhealing ulcer on the genitals for 3 months. There was no history of pain, discharge, or preceding blistering in the area. There was a history of unprotected intercourse with multiple sexual partners, and the last sexual encounter took place around 6 months back. She complained of weight loss and generalized weakness in the past few months. The husband was apparently healthy and denied a similar history. On examination, the patient was found to be lean, thin, and pale. Rest of the systemic examination was normal. Local examination revealed the presence of multiple ulcers ranging from 5 cm × 4 cm...
to 1 cm × 1 cm. The ulcers were beefy red, slightly exuberant, nontender with everted edges, and bled on slight manipulation [Figure 1]. There was no inguinal lymphadenopathy. Rest of the cutaneous examination was unremarkable.

A tissue smear from the ulcer edge and stained with Giemsa stain showed intracellular purple coccobacilli with pink capsule and bipolar inclusions under oil immersion. Histopathology of the lesion showed nonspecific chronic inflammation with neutrophils and plasma cells in the dermis with ulcerated epidermis. A diagnosis of donovanosis was made. A venereal disease research laboratory test was nonreactive. She was found to have HIV infection which was diagnosed by three positive tests based on different principles, namely the Meriscreen test (immunochromatographic test), Comb Aids test (immunocomb test), and Tredro test (immunodot test), as per the NACO guidelines. She had a CD4 cell count of 64/mm$^3$. The husband was nonreactive for HIV. She was also found to have hemoglobin of 7.3 gm% and her total leukocyte count was low (3300/mm$^3$). Other biochemical and imaging studies were normal. Antiretroviral therapy was initiated, and the patient was given tablet azithromycin 500 mg daily. At 2-week follow-up, the ulcers did not improve rather showed spread. Thus, the addition of parenteral gentamycin was advised to the patient. This was not possible as the patient refused admission and she could not have injectables at home due to nonavailability of trained health professionals at her rural home. Subsequently, she was treated with doxycycline 100 mg twice a day for 4 weeks, and the lesions healed completely leaving areas of hypopigmentation [Figure 2] at the ulcer site.

Donovanosis was first described by Macleod and the causative organism identified by Charles Donovan.[1] It presents as a papule that erodes and forms an ulcer that may be ulcerogranulomatous, necrotic, hypertrophic, or sclerotic type. However, our patient did not notice the initial papular lesion. The disease is mainly transmitted through the sexual route, and 90% of lesions are in the anogenital area.[2] The disease is rare in North India, and the incidence is below 0.5%.[3] Disease complications range from pseudoelephantiasis of the genitals, stenosis of the urethra, vagina, and anal canal, partial or total penile amputation, and development of squamous cell carcinoma.[3,4]

Azithromycin 1 g weekly or 500 mg daily for at least 3 weeks or till complete healing of lesions is the first-line therapy of donovanosis as per the guidelines of the United States Centers for Disease Control and Prevention. Other options include doxycycline, erythromycin, and ciprofloxacin. The treatment remains the same for HIV patients as well, but an aminoglycoside (gentamycin 1 mg/kg i.v. every 8 h) is to be added if treatment fails.[5] In our case, the addition of gentamicin to azithromycin was not possible, and she was switched to oral doxycycline.

Like other sexually transmitted infections, HIV and donovanosis coinfection alters the course and presentation of the latter. Donovanosis produces an obvious increase in the transmission rate of HIV due to breach in the epithelium. This serodiscordance can be attributed to the couple being recently married or possibility of being infected but in window period. He is being followed up and has been advised repeat HIV testing after 4 months of initial testing. Donovanosis in an HIV-positive person produces more tissue destruction and prolongs the healing time of donovanosis from an average of 17 days in non-HIV infected to 26 days in an HIV-infected patient, though the size of lesions at presentation is not significantly increased.[6] Our patient took slightly more time than usual to respond to the combination therapy. This can be attributed to her severely immunosuppressed status. HIV also increases the chances of squamous cell carcinoma in donovanosis.[3] Further, culture
yield is low in coinfection and diagnosis hinges on the demonstration of bacteria in crushed and Giemsa-stained smears. These patients also tend to have a higher rate of failure to azithromycin as first-line antibiotic therapy and a combination of antibiotics might be needed for cure as was demonstrated in our case.[1,7]

Declaration of patient consent
The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest
There are no conflicts of interest.

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