CASE REPORT

Genital lepromatous leprosy with bilateral inguinal lymphadenopathy simulating lymphogranuloma venerum

SWETALINA PRADHAN*, CHANDRA SEKHAR SIRKA*, DEBJANI PANDA* & SUSAMA PATRA*
*All India Institute of Medical Sciences, Bhubaneswar, Odisha, India

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Summary  Involvement of genitalia is rare in leprosy. A 35 year old man presented with multiple papules and nodules over his scrotum, the shaft of his penis, glans and prepuce along with bilateral painless inguinal lymphadenopathy and thereby simulating lymphogranuloma venerum (LGV). A detailed dermatological examination along with cytology from a lymph node and histopathology of a nodule over the glans and lepromatous leprosy in globi in inguinal lymphnodes confirmed the diagnosis of Hansen’s disease. The patient was started with the WHO MDT adult regimen for multibacillary leprosy and the nodules and lymph nodes decreased in size after 1 month of treatment. The case is unique for the extensive involvement of genitalia and bilateral inguinal lymphadenopathy which simulated LGV.

Introduction

Leprosy has been declared ‘eliminated’ since 2005. In the ‘post elimination era’ the scenario of leprosy has changed, meaning increasing incidence of lepromatous leprosy, unusual presentations and rare body site involvement is now common. We report a case of lepromatous leprosy with extensive involvement of the genitalia and bilateral inguinal lymphadenopathy simulating lymphogranuloma venerum.

A 35 year old man presented with painless nodules over his genitalia since for 1½ years and swelling over the inguinal area for 6 months. On examination of his genitalia, there were multiple papule-nodules, with a few nodules having crusting on the surface over the scrotum, glans, prepuce and shaft of the penis (Figure 1A).

There were three enlarged inguinal lymph nodes 1·5 to 1 cm on the left and 0·3 to 1·0 cm on the right (Figure 1B).

All the lymph nodes were mobile and firm in consistency. The patient denied any history of extra-marital sexual contact, any history of genital ulcers or discharge in the past, and
denied that his wife had similar problems. A whole-body examination revealed shiny papules and nodules over his trunk, bilateral ear lobes, extremities, palms and soles, madarosis, loss of eyelashes on lower eye lids, fissuring over his bilateral foot, nasal depression and atrophic scars over his bilateral legs. On cross questioning he admitted that the above-mentioned nodules had been present for the last 5 years and were asymptomatic, although he didn’t consult any physician. Sensory examination showed stocking and glove type anaesthesia on his extremities and loss of olfactory sensation. A motor examination highlighted atrophy of the small muscles of his hand and Froment’s sign was positive. The patient was investigated for chancroid, syphilis, LGV and Hansen’s disease.

RPR, VDRL and tests for HIV I and II were negative. A slit-skin smear from the ear and genital nodules revealed plenty of bacilli in globi. Histopathology from the nodule over the glans showed keratinised squamous epithelium in the epidermis, clear zone (grenz zone) under the epidermis with sheets of foamy macrophages laden with AFB in the lamina propria and destroyed nerve bundles (Figure 2A).

Fite Faracco staining revealed numerous solid AFB in globi located in the macrophages, endothelial cells and nerve bundles with BI being 6+ (Figure 2B).

FNAC of inguinal lymphnode was sparsely cellular with lymphocytes, a few plasma cells and scattered foamy histiocytes (Figure 2C).

The aspirated fluid was stained with Gram stain, Giemsa–Romanowsky stain and Fite’s stain. The Gram stain and Giemsa stain didn’t reveal any features of chancroid and LGV.
(inclusion or elementary bodies of Chlamydia) respectively. However, the later showed solid acid-fast bacilli (AFB) in clumps and within foamy macrophages with Bacillary index (BI) being 5+ (Figure 2D). The serological tests for chancroid and LGV couldn’t be done.

Based on the clinical, histopathological and cytological findings the patient was diagnosed lepromatous leprosy with lymphadenopathy. He was treated with WHO multidrug therapy adult regimen for multibacillary leprosy. After 1 month of WHO MDT the genital nodules and lymphnodes decreased in size (Figure 1B and 1C). The patient is now on MDT and under follow up.

**Discussion**

The patient presented with genital lesion and bilateral inguinal lymphadenopathy. There was no history and clinical evidence of urethral discharge. Chancroid, syphilis and LGV were considered by a differential diagnosis. Chancroid presents with painful genital ulcers with a necrotic slough and painful lymphadenopathy. On gram staining the bacilli were seen as gram negative coccobacilli, in end-to-end pairs, chains, or clusters with a typical ‘school of fish’ appearance. Syphilis presents with painless, indurated, clean genital ulcers and shotty lymphadenopathy. The patient had no genital ulcers and serological tests for syphilis were negative. In LGV there occurs a transient genital ulcer followed by painless or painful
prominent inguinal lymphadenopathy. FNAC from the lymph node shows features of suppurative lymphadenitis. In our case the patient had genital nodules and bilateral inguinal lymphadenopathy which closely mimicked LGV. However clinical, cytological and histopathological findings proved it to be a case of lepromatous leprosy with bilateral inguinal lymphadenopathy.

Lymph node enlargement is unusual in leprosy except during lepra reaction in which may enlargement and associated tenderness due to reactive lymphadenitis is present, and patients have other systemic and cutaneous manifestations of lepra reaction.¹

Lymph node involvement in lepromatous leprosy has very characteristic microscopic features. It is characterised by the progressive accumulation of large, pale, rounded histiocytes, without granuloma formation and with minimal or no necrosis.²

The lepra bacilli mostly prefers cold temperatures and hence affects uncovered body parts like the skin, peripheral nerves that have relatively lower temperatures and are more prone to trauma. Hence lesions of leprosy are commonly found over the face, knees, elbows, the gluteal regions, and dorsal aspects of the extremities, and trunk.³,⁴

There are certain areas of the body like the scalp, palms and soles, genitalia, groin, axillae, eyelids, and perineum where the temperature is relatively high and therefore not preferred by the leprosy bacilli and are considered to be immune zones of leprosy.³,⁵–⁷

There have been a few reports of the involvement of the scrotum and male genitalia but simultaneous involvement of the scrotum, glans, prepuce, shaft of the penis, palms and soles associated bilateral inguinal lymphadenopathy with globi of bacilli in lymphnode has not been described in literature so far. This case is unique for the extensive genital involvement and bilateral inguinal lymphadenopathy which responded to WHO MDT.

References

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⁶ Aggarwal SK, Arora PN, Chattopadhya SP, Ramakrishnan KR. Primary Involvement of sole in leprosy. Indian J Lepr, 1987; 57: 472–473.