

Problems in the diagnosis of lymphogranuloma venereum

A review of 6 cases

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Summary

Six cases of lymphogranuloma venereum are described in White South Africans. All initially presented diagnostic problems. This sexually transmitted disease is uncommon in South Africa, and 5 of the 6 patients presented with inguinal lymphadenopathy without a primary lesion. The value of serological tests in the diagnosis of this disease is emphasized.

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Lymphogranuloma venereum (LGV) is a sexually transmitted disease caused by *Chlamydia trachomatis* serotypes L1, L2 and L3. These serotypes differ biologically from other members of the species, being more invasive than those serotypes responsible for trachoma and other oculogenital infections.¹ LGV has a world-wide distribution but is most prevalent in tropical and subtropical countries. In recent years the incidence of the disease appears to have declined considerably, a finding which has been attributed to improved standards of living.²

The disease is classically described as an infection of the regional lymphatics draining the genitalia, and the most common presentation is therefore significant inguinal lymphadenopathy,

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frequently without an obvious primary lesion. The infection is more commonly diagnosed in men than in women, who probably act as asymptomatic carriers. The only previous report of LGV in South Africa is that of Ulman,³ who described a series of 16 cases in Black women seen at Baragwanath Hospital, Johannesburg. In his series all cases were diagnosed on clinical grounds with additional evidence provided by positive Frei skin tests. All the patients evaluated were admitted to hospital with erroneous diagnoses, and he felt that the correct diagnosis was ultimately made only because he was actively seeking cases of the disease.

In this report we describe 6 cases of LGV in White men. In each case there were initial diagnostic problems. The diagnosis of LGV was only subsequently made on clinical grounds and supported by serological evidence of infection. In 2 cases the results of histological investigations further supported the diagnosis.

Case reports

Case 1. A young man presented with a 1-month history of progressive enlargement of the inguinal lymph nodes on the right side. There was no preceding urethral discharge or penile ulceration. A diagnosis of Hodgkin's disease was considered, but before referring the patient for a biopsy a number of other laboratory tests were performed. These included a chlamydial complement fixation test, which was positive at a titre of 1:64, and rapid plasma reagin (RPR) and fluorescent treponemal antibody-absorption (FTA-Abs) tests, which were negative. The patient was treated with tetracycline 250 mg 4 times daily for 3 weeks with complete resolution of the lymphadenopathy. His history suggests that the infection had probably been acquired in Swaziland.

Case 2. The patient presented with bilateral inguinal lymphadenopathy with no previous history of genital ulceration or urethral discharge. No definite diagnosis was made, and he was given short courses of amoxicillin and erythromycin without clinical response. A few days later the left inguinal nodes suppurated and drained. A biopsy was taken which showed nonspecific

infection. One week later the nodes on the right suppurated and another biopsy was taken. Histological examination showed central suppuration with surrounding epithelioid histiocytes. The possibility of LGV or cat-scratch disease was suggested. At this point a chlamydial complement fixation test was performed, which was strongly positive at a titre of 1:2048. The RPR and FTA-Abs tests were negative. As a result the patient was given a 4-week course of tetracycline with a good clinical response.

Case 3. This patient presented with a 2-week history of right-sided inguinal lymphadenopathy following a visit to Swaziland. There was no history of genital ulceration or urethral discharge. At this time a chlamydial complement fixation test and RPR and FTA-Abs tests all proved negative. A lymph node biopsy was performed and revealed abscesses consisting of aggregates of histiocytes, lymphocytes and plasma cells with breakdown in the central areas. Cat-scratch disease or LGV was considered as a possible diagnosis. The patient was given a 4-week course of tetracycline and the lymphadenopathy resolved completely. A chlamydial complement fixation test performed 4 weeks after biopsy was positive at a titre of 1:128.

Case 4. This patient had previously been treated for primary syphilis which had been confirmed serologically. Nine months later he developed right-sided inguinal lymphadenopathy which had not been preceded by any genital ulceration or urethral discharge. At this time a chlamydial complement fixation test was positive at a titre of 1:4096; the RPR test was negative and the FTA-Abs test positive (presumably as a result of previous syphilis). A diagnosis of LGV was made, and the patient was given tetracycline 250 mg 4 times a day for 4 weeks. Despite therapy the lymph nodes showed no improvement and eventually became fluctuant. Approximately 8 ml of pus was aspirated. He was given a further course of tetracycline with a good clinical response.

Case 5. A small painless penile ulcer of 3-4 days' duration was the presenting feature in this patient. This was followed by bilateral tender lymphadenopathy. Culture of material from the base of the ulcer was negative for *Haemophilus ducreyi*, and serological tests for syphilis were negative. A chlamydial complement fixation test was positive at a titre of 1:256. The patient was given tetracycline, which resulted in complete resolution of his lymphadenopathy. Three weeks later his wife was seen by another practitioner for a swelling in the right groin. She was referred to a surgeon with a diagnosis of a femoral hernia. At this point, because of the diagnosis of LGV in her husband, a chlamydial complement fixation test was done. This was positive at a titre of 1:64. She was also successfully treated with tetracycline.

Case 6. The final patient in this series presented with unilateral inguinal and femoral swellings initially thought to be a hernia (Fig. 1). The onset of these signs had been immediately

preceded by transient urethral discharge with burning on micturition. On examination there was no evidence of urethritis or ulceration, but both the inguinal and femoral lymph nodes were enlarged and tender. Both the RPR and FTA-Abs tests were negative but the chlamydial immunofluorescence test was positive at a titre of 1:4096. The patient was treated with tetracycline 500 mg 6-hourly for 3 weeks with complete resolution of the disease. His most recent sexual contact had been in Swaziland, approximately 2 weeks before the onset of symptoms.

Discussion

All 6 patients in this series presented with the classic clinical features of LGV as exemplified by significant and painful inguinal lymphadenopathy with little or no genital ulceration. In each case the diagnosis was confirmed by positive serological tests for LGV and all the patients responded to treatment with tetracycline. However, in none of these patients was LGV the initial diagnosis. Three patients were initially thought to have a lymphoma. Biopsies were subsequently performed on 2 of these patients for a histological diagnosis. One patient was originally suspected of having an inguinal hernia and the other 2 were diagnosed as having syphilis.

Difficulty in making a diagnosis of LGV in a patient with significant inguinal lymphadenopathy arises as a result of the absence of a primary genital lesion in most cases and the fact that LGV has been considered a rare disease in South Africa. It is probably significant that 3 of our patients acquired their infections in Swaziland, where a high incidence of the disease has recently been reported.⁴ In this series only 1 of the 6 patients presented with a primary lesion. This is a similar proportion of cases to that described by Alergant⁵ and Sigel⁶ who found primary lesions in only 24% and 26% of cases respectively. LGV is therefore the most likely cause of significant inguinal lymphadenopathy in the absence of genital ulceration. In contrast, patients with significant genital ulceration and associated lymphadenopathy are more likely to have chancroid. The laboratory isolation of the causative organism *H. ducreyi* has been greatly improved by inoculating material from the base of the ulcer directly onto a well-defined culture medium.⁷ Although in classic descriptions the discrete rubbery, painless lymph nodes of syphilis differ from the matted lymph nodes of LGV, the former must always be excluded by appropriate laboratory tests. For LGV, agent isolation is the only laboratory proof available. Since facilities for the isolation of *Chlam. trachomatis* are available only in a few centres in South Africa, serological methods (either complement fixation or micro-immunofluorescence tests) remain the best aids in the diagnosis of the disease.²

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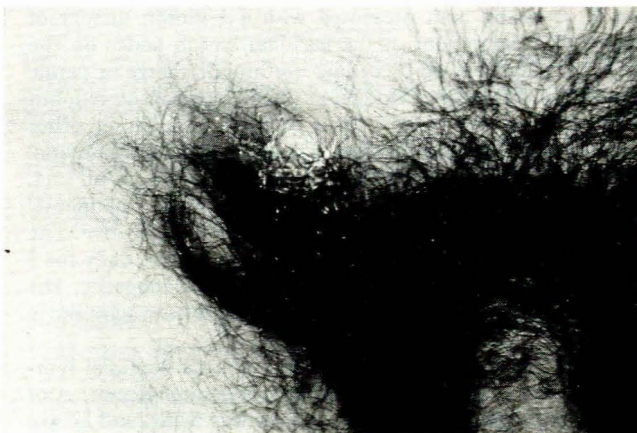


Fig. 1. The classic groove sign, due to enlarged inguinal and femoral nodes, may be seen.