

INGUINAL BUBO: PROBLEMS IN DIAGNOSIS

K N Mohammed

ABSTRACT

Two of the four patients with tropical venereal diseases underwent incision and drainage of the inguinal bubo resulting in discharging sinus before they were referred to the Skin Clinic. Clinical diagnosis was made in all four but could not be confirmed. With appropriate therapy resolution was achieved without complications. The difficulties in arriving at and establishing the diagnosis are discussed.

Keywords : Inguinal bubo, lymphogranuloma venereum, chancroid, non-healing sinus, tetracycline.

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INTRODUCTION

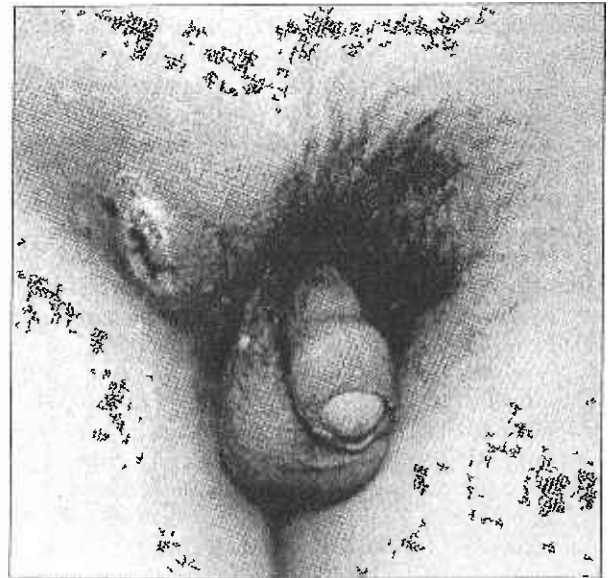
Lymphogranuloma venereum (LGV) and chancroid are two significant tropical sexually transmitted diseases (STD) which produce painful, suppurative inguinal adenitis. LGV, a disease of the lymphatics, is caused by certain strains of *Chlamydia trachomatis* serovars L1 - L3, usually L2, which is a bacterium and not a large virus as it was once thought to be. The causative agent of chancroid is *Haemophilus ducreyi*, a Gram-negative coccobacillus found in chains. Both these microorganisms cannot be easily isolated and therefore the diagnosis mostly depends upon the clinical evaluation. Patients with chancroid usually present with genital ulcer; those with LGV frequently have no ulcer when they seek treatment for painful lymph nodes. Inguinal lymphadenitis or bubo without a genital ulcer and failure in obtaining a sexual history may mislead the doctor at primary care centres where these patients generally visit, and end in surgical relief with a persistent sinus. Three patients with LGV and one with chancroid are described to highlight the importance of making an early clinical diagnosis in the absence of availability of specific investigations. Sexual history which is at times difficult to obtain in developing countries is vital for diagnosis and should be obtained in all patients with inguinal adenitis. Correct and timely treatment is needed to avoid spontaneous rupture. It is also emphasized that caution and restraint should be exercised not to incise the bubo but to aspirate it.

CASE REPORTS

Case 1

A 25-year-old unmarried Chinese male presented at Johor Bahru with a persistent sinus at the right inguinal region (Fig 1). He was previously seen at an out-patient department for painful, enlarged lymph nodes of the groin of 3 days' duration which was incised and drained. Oral cloxacillin was prescribed. He denied sexual exposure and dismissed as irrelevant its relationship to his symptoms. On persuading him of the need of this information he admitted that his last sexual intercourse

Fig 1 - Inguinal bubo with draining sinus.



(LSI) was more than a month ago with a prostitute and that he was a heterosexual. There was no history of dysuria, or penile ulcer or precautionary use of condom. Three weeks ago he noticed pain and swelling of the inguinal group of nodes associated with fever, chills, lethargy, headache, arthralgia and myalgia. Right femoral nodes were also enlarged and tender. Lymph nodes of the left side of the groin or other parts of the body were not involved. There was no urethral discharge and no foci of infection in the lower limbs. Based on the history and the inguinal syndrome he was diagnosed as a case of LGV. Proctoscopy was normal. Two-glass urine test was clear, Venereal disease research laboratory (VDRL) test was non-reactive, Treponema pallidum haemagglutination (TPHA) test and ELISA test for HIV antibody were negative. Frei skin test, culture of chlamydia in McCoy cells and complement fixation (CF) test could not be done. Skin biopsy was refused. He was administered doxycycline 200 mg daily for 3 weeks taken with a cup of milk. The sinus cleaned with antiseptic healed. The contact could not be traced.

Case 2

A 22-year-old single Malay girl was referred to the Skin Clinic for swelling of the right inguinal lymph nodes of one week duration. She flatly denied sexual exposure and never failed to show her resentment. Since she had experienced constitutional symptoms in the presence of unilateral adenitis she was persuaded to impart information and assured of its confidentiality.

Her LSI was about 4 weeks ago with her boy-friend. The right inguinal, femoral and iliac groups of nodes were tender.

Department of Dermatology
Sultanah Aminah General Hospital
Johor Bahru, Malaysia
and
General Hospital
Penang, Malaysia

K N Mohammed, MBBS, Dip Derm, Dip Ven
Consultant

Correspondence to: Dr K N Mohammed
Department of Dermatology
General Hospital
10990 Penang
Malaysia

The enlarged and inflamed nodes above and below the taut inguinal ligament exhibited the 'groove sign' which is almost pathognomonic of LGV. The overlying skin was fixed, warm and the nodes were matted but not fluctuant. Gonococcus was not isolated from endocervix, urethra, rectum or pharynx. She was warded and prescribed tetracycline 500 mg 6 hourly before meals for 3 weeks. She was advised to avoid dairy products, iron and citrus fruits. She responded well without anorectal involvement.

Case 3

An 18-year-old Indian male presented with left inguinal bubo and multiple painful ulcers of 5 days' duration on the shaft of the penis (Fig 2). His LSI was one week before the ulcer appeared. The base of the ulcer was covered with a slough and was tender. *Treponema pallidum* was not found on dark-ground (DG) microscopy of the serous discharge; *H. ducreyi* was not identified in Gram stain and culture of the bacilli could not be done. He was diagnosed to have chancroid. The bubo was aspirated with a large-bore needle under ethyl chloride spray. He was given co-trimoxazole (400 mg + 80 mg) 2 tablets twice a day for 10 days. The bubo resolved and the ulcers healed. VDRL tests done before and one month after treatment were non-reactive.

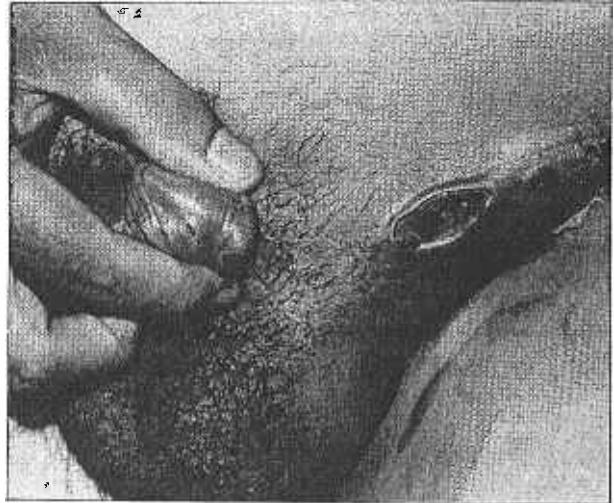
Fig 2 - Chancroidal ulcers.



Case 4

A 26-year-old Chinese male was referred to the STD Clinic at Macalister Road, Penang after the left inguinal bubo of 5 days' duration was incised by a doctor. He was promiscuous and his LSI was 2 weeks ago with prostitutes. He presented with a small, painless, non-indurated ulcer at the ventral aspect of the corona glandis; a gaping wound and spontaneously ruptured bubo at the right groin (Fig 3). DG examination was negative for *T. pallidum*, VDRL test was reactive in 2 dilution and

Fig 3 - Penile ulcer with ruptured bubo.



TPHA was positive. Since it is not uncommon to contract LGV and syphilis together in this high-risk group, he was treated with doxycycline 100 mg twice daily for 3 weeks and 2 courses of benzathene penicillin 2.4 mega unit, each one week apart. The wounds healed well with good granulation.

DISCUSSION

In certain developing countries dermatology clinics serve as the referral centres for skin disorders, STD and leprosy. Chancroid and LGV are found world-wide but more prevalent in tropical and subtropical regions. STD associated with inguinal bubo in order of frequency are LGV, chancroid and rarely herpes simplex. In LGV, the genital ulcer appears within 3 days to 3 weeks of exposure or heals unnoticed in a few days without scarring. In one-third of patients the inguinal adenitis is bilateral. Primary anorectal infection occurs in women and homosexual men. Chancre of syphilis develops between 3 to 5 weeks at the site of inoculation of *T. pallidum* and VDRL becomes positive few days or weeks later. The incubation period of chancroid ranges from 24 hours to 10 days and that of genital herpes 3 days to 3 weeks. The clinical features, diagnosis, treatment and complications of these diseases⁽¹⁻³⁾ and lymphatic drainage of the genitalia⁽⁴⁾ are well described. Most patients seek treatment for inguinal bubo at busy out-patient departments where sexual history may be overlooked in the absence of a genital ulcer. Even in well established referral clinics where privacy and confidentiality are assured, obtaining it is not easy as reflected in our patients. They harbour a sense of guilt and shame. Pre and extra marital sexual affairs evoke strong feelings of remorse, agitation and infidelity resulting in initial denial. The author vividly recalls a man who vehemently denied but later admitted to having sexual exposure when unequivocal evidence of adult gonococcal ophthalmia due to penicillinase-producing *Neisseria gonorrhoeae* (PPNG) was produced. Trespassing into very personal, sensitive areas of patients' life especially that of women in developing countries should be done with tact, motivation and with clear indication. Doctors who have not worked in STD clinics, when seeing patients with inguinal bubo with or without a genital ulcer and a negative sexual history may be tempted to 'plunge' a knife instead of 'inserting' a needle.

The laboratory tests to diagnose LGV are not confirmatory. The Frei test using intradermal Frei antigen which is not commercially available has fallen out of favour since it is neither specific nor sensitive; the chlamydial culture in yolk

sac from bubo aspirate is positive in about 20 to 40 percent of patients only; the CF test in which a common antigen to all chlamydia is used is not specific for LGV; in micro-immunofluorescent test, cross-reactivity is seen among different strains of *C. trachomatis* and problems arise in the identification of the LGV strain responsible⁽³⁾. However, these tests are not commonly and easily available. The three tests to diagnose chancroid are not without difficulties. It is not easy to recognise the typical morphological features of *H. ducreyi* which may resemble a shoal of fish in the Gram stain of the direct smear from the ulcer or bubo aspirate; auto-inoculation test using killed *H. ducreyi* suspension is of doubtful value and false positive reactions have rendered it unpopular and obsolete; culture of the organisms in the media containing whole blood is difficult but confirmatory and is positive in a few clinically-diagnosed patients since *H. Ducreyi* is fastidious^(1,2,5). Therefore, in places where these investigations are not available or not within reach, high index of clinical suspicion should be the basis for treatment. Improper intake of tetracycline is a

cause of treatment failure. Our patients responded well to doxycycline without gastric complaints and to tetracycline which forms insoluble chelates with calcium and acids; their sinus healed with adjunct local antiseptic.

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The Secretariat
Communication Consultants
336 Smith Street #06-302
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