

## Atypical Presentation of Co-existent *Haemophilus ducreyi* and *Treponema pallidum* Infection in an HIV-positive Male

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**A 25-year-old homosexual black male presented with asymmetrical perianal ulceration of uncertain clinical origin. In-depth microbiological examination revealed the combined presence of *Haemophilus ducreyi* and *Treponema pallidum*. The atypical clinical appearance may have been due to the changed immunological status of the host's being infected with Human Immunodeficiency Virus. Key words: Genital ulcer disease; HIV-1 infection.**

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Genital ulcer disease is hyperendemic in tropical Africa and South East Asia, but relatively rare in Western Europe. *H. ducreyi*, *Treponema pallidum* or *Herpes simplex* virus are the responsible pathogens in the vast majority of cases, but differences in the relative frequency are seen in differing geographic regions (1, 2).

The seriousness of the disease is linked to the fact that genital ulcers are a major risk factor for acquiring HIV-1 (3, 4). We present a case of a male patient presenting with an atypical clinical picture and an unexpected result of the microbiological examinations.

### CASE REPORT

A 25-year-old black male from New York presented in August 1990, having developed a painful perianal ulceration. It had been growing slowly for the last 4 weeks. When asked explicitly the patient confirmed that he was homosexual and that he had had sexual, including anal and oral intercourse with a number of partners during his 2-month stay in Europe.

Examination revealed symmetrically on each flank of the buttock a curved raw ulceration, elevated above skin level and surrounded by a wall-like proliferation. The predominant ulceration was surrounded by smaller ulcers originating from the hair follicles on both flanks (Fig. 1). The ulcers bled readily and were not indurated. There was little inflammation of the surrounding skin. The inguinal lymph nodes were enlarged and painful.

After cleansing the ulcer thoroughly, material for the microbiological examination was collected from the ulcer base. Dark-field examination of the ulcer exudate proved positive for *Treponema pallidum*. Serological tests were also positive: rapid plasma reagin card (RPR) test, IgG-fluorescent treponemal antibody absorption (FTA-ABS) test, IgM-FTA-ABS test, and 19S-IgM-FTA-ABS test.

By Gram staining, no "railroad tracks" such as the characteristic microscopic sign for the presence of *H. ducreyi* could be detected, but culture on a selective medium consisting of Columbia agar base, 2.5% fetal calf serum, 1.5% IsoVitaleX and 3 mg/l vancomycin in a candle extinction jar with increased humidity at 35°C for 48 h revealed colonies typical of *H. ducreyi*. Final identification was based on Kilian's criteria (5).

*Herpes simplex* virus could not be detected by any of the three methods used: direct microscopic identification via fluorescence-labelled monoclonal mouse antibodies (Micro Trak-Herpes-test®), of electron-microscopic analysis of negative stained material, or of culturing on human foreskin fibroblasts.

Negative results were also obtained for *Chlamydia trachomatis* and *Neisseria gonorrhoeae*.

Serum antibodies to HIV were detected using an ELISA and confirmed by Western blot.

Cellular immunity: T-helper/T-suppressor ratio CD4/CD8 1.3 (normal: 1.5–2.0) with an absolute CD4 lymphocyte count of 350/mm<sup>3</sup> (normal: > 400/mm<sup>3</sup>).

Treatment recommendation was based on the "1989 Sexually Transmitted Treatment Guidelines" of the Centers for Disease Control (6), consisting of combined therapy with erythromycin (erythromycin base 500 mg orally four times a day for 10 days; erythromycin was preferred to the one-shot treatment with ceftriaxone (250 mg intramuscularly) due to the co-infection with HIV) and benzathine penicillin G (2.4 million units intramuscularly, in one dose, as recommended for primary and secondary syphilis and early latent syphilis of less than 1 year's duration) with frequent follow-up examinations, including serological testing and CSF examination if neces-

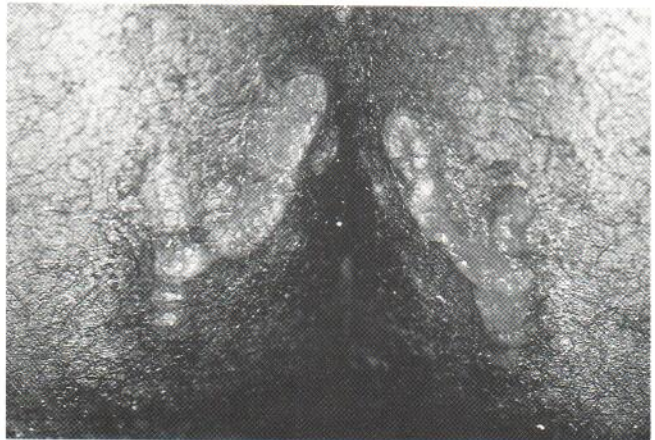


Fig. 1. Perianal ulcer due to concomitant *H. ducreyi* and *Treponema pallidum* infection.

sary. Due to the patient's return to the USA we have no information on the treatment outcome.

## DISCUSSION

Today it is generally accepted and could also be demonstrated in the case presented that the precise etiological diagnosis of genital ulceration cannot rest solely on the clinical impression. In a recent study by Sturm and colleagues (7), in 15 (33%) of 46 episodes of ulceration the clinical diagnosis did not agree with the microbiological findings. A complete microbiological examination is necessary demanded in all cases of genital ulceration if this is feasible in financial terms.

Furthermore, the clinical appearance of the classical sexually transmitted diseases such as chancroid or syphilis has changed in the age of AIDS and more severe courses of disease can nowadays be seen in patients whose immune system is weakened by infection with HIV (R. C. Ballard, Johannesburg, South Africa; personal communication). In fact, the size of the ulcer seen in our patient has to be traced back to a debilitated host defence as indicated by a reduced cellular immunity. Concerning therapy, preliminary results suggest that HIV-positive patients with concomitant *Treponema pallidum* and/or *H. ducreyi* infection may benefit from a longer rather than a shorter course of therapy and may require closer follow-up than those not so infected. This is recommended both for infection due to *H. ducreyi* (8) and for *Treponema pallidum* (9). Recent findings suggest that HIV infection may alter the natural course of syphilis because of the profound defects in cell-mediated immunity (10). Development of gummatous lesions (11) or neurosyphilis (10) despite previous adequate treatment of syphilis have been reported in patients with HIV infection. Based on these findings, a lumbar punc-

ture in the evaluation of HIV-seropositive patients with syphilis and a modification of the currently recommended treatment regimens, i. e., i. v. injection of benzyl penicillin as in neuroleptic infection, are mandatory.

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