

Case report

Primary tuberculosis of the penis

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Abstract

We present a case of primary tuberculosis of the inner lining of the prepuce in a 63-year-old man. The condition resembled carcinoma. The diagnosis was based on histopathology and on *M. tuberculosis* culture. Successful treatment was by a combined medical and surgical approach. The rarity of the case is emphasized. © 1999 Elsevier Science B.V. All rights reserved.

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1. Introduction

Primary tuberculosis of the penis is now extremely rare. Infantile ritual circumcision was in the past a frequent cause in developed countries [1]. At present primary tuberculosis of the penis is extremely rare in developed countries where infantile ritual circumcision is still practised, but it is occasionally seen in underdeveloped areas [2]. Tubercle bacilli were isolated from one patient reported to have primary penile tuberculosis, unrelated to circumcision, in 1992 [3]. We report a case which was bacteriologically diagnosed.

2. Case report

A 63-year-old, 40-year-married, Italian man had a

4-month history of an initially erythematous, and subsequently ulcerated, painless lesion on the inner lining of the prepuce. There was no family history of tuberculosis and the patient denied any extramarital sexual contacts. Two months earlier, elsewhere, the ulcer was biopsied because a carcinoma was suspected: chronic non-specific inflammation was found with no signs of malignancy or granuloma formation. The biopsy of the ulcer did not show acid-fast bacilli in situ.

The cutaneous findings consisted of an ulcerated, painless, red nodule in the inner lining of the prepuce, 15 mm in diameter, with regular margins. The remainder of the penis and the scrotal contents were normal (Fig. 1). The patient had appreciable, indolent, enlarged right inguinal lymph nodes, which subsequently became slightly tender (Fig. 2).

Routine laboratory studies of blood tests, urine-analysis and liver and renal function tests were within normal limits. The serologic tests for syphilis (vener-

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Fig. 1. Ulcerated nodule in the inner lining of the prepuce.

cal disease research laboratory (VDRL), *Treponema pallidum* haemoagglutination (TPHA) and fluorescent treponemal antibody (FTA-abs)) and for *Chlamydia trachomatis* (indirect immunofluorescence (IIF)) were negative.

Dark field microscopy for *Treponema pallidum* and swab-cultures for *Haemophilus ducreyi* and other common aerobic bacteria and fungi gave negative results.

There was a strong intradermal reaction to tuberculin (Fig. 3). A biopsy from the lesion showed a granulomatous inflammation with giant Langerhans-type cells. A culture of the biopsied skin revealed the presence of *Mycobacterium tuberculosis*. Urine and sputum cultures for acid-fast bacilli were negative and chest radiography and abdomen echography showed normal results.

Oral treatment with rifampicin 600 mg, isoniazid 200 mg and pirazinamide 500 mg was given daily.

Two months later the ulcer showed signs of healing



Fig. 2. Enlarged right inguinal slightly tender lymph nodes.



Fig. 3. Strong intradermal reaction to tuberculin.

and the progression of the disease was halted, but the lymph nodes remain unmodified. Surgical swabbing was undertaken and *M. tuberculosis* was again isolated from the removed lymph nodes. Pirazinamide was substituted with streptomycin 1 g i.m. daily for 2 weeks, and 4 months later the lesion healed completely and the therapy was stopped. On follow up 1 year later, the patient remained well.

The route of infection remains unclear: the man denied any extramarital sexual contact and his wife refused any clinical evaluation.

3. Discussion

Tuberculosis of the penis usually presents as a primary lesion, though it may be secondary to an active focus at other sites in the body. Lewis [1] found 110 cases of penile tuberculosis from a literature search in 1946: 89 cases were primary, eight secondary, nine not stated, one not determined and three haematogen-

ous. Of the 89 primary cases, 72 were the result of ritual circumcision. Of the remaining 17 primary cases, 12 were definitely stated as resulting from coitus, two from non-ritual circumcision, two from oral-genital sex and one from wearing infected clothing. Only 20 additional cases of primary tuberculosis of the penis were recorded from 1946 to 1985 [4] and few cases are reported since 1985 [5].

In this case the lesion was a primary type and started in the inner lining of the prepuce. The hardness and the apparent lack of pain initially suggested a syphilitic chancre or carcinoma.

Histopathology, negative serologic findings and a strong tuberculin reaction helped to make a diagnosis, which was confirmed by two positive cultures for *M. tuberculosis* and by a good response to treatment.

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