Microsporum canis infection of the penis

A dermatophyte infection of the penis is rare and it has been described most often associated with tinea cruris. We report a case of a 26 year old man with tinea of the penis, without groin or scrotal involvement, which was interpreted as tinea corporis presenting in an unusual localisation.

CASE REPORT

A 26 year old male veterinarian consulted us for a mildly scaly patch with irregular, well delimited active borders localised on the dorsal surface of the shaft (fig). The lesion was about 1.5 x 2 cm in size. A smaller papular lesion (0.5 x 1 cm) was also present nearby. These totally asymptomatic lesions had appeared 15 days before. There were no lesions in the groin or elsewhere.

Microscopic examination of the scales from the margins of the lesions in 10% KOH preparation showed multiple septate hyphae. Culture in Sabouraud's medium revealed growth of colonies identified as Microsporum canis. Direct microscopic examination as well as culture from scrotum, crural folds, palms, and fingernails were negative. Therapy with econazole nitrate cream applied twice a day for 2 weeks induced a complete healing of the lesions. A follow up skin examination after 1 month was negative for dermatophytosis.

COMMENT

In patients with tinea cruris the fungus usually spreads rapidly through the inguinal and perineal skin, occasionally involving perianal and scrotal areas and rarely the penoscrotal junction.1,2 Dermatophytes are not usually isolated from the shaft, as the lesion is generally not involved. It has been suspected that poor hydration of the skin of the penis due to scarce activity of eccrine sweat glands would not allow a fungal colonisation.3 It might be hypothesised, however, that dermatophytosis of the penis is underestimated because clinical manifestations are often mild and self healing. The penile shaft fungal infections reported in the literature to date are, in decreasing order, due to Trichophyton rubrum, T mentagrophytes, and Epidermophyton floccosum.4,5 Most cases have been described in India where the use of "lengyot" , a semioccclusive undergarment which is tied tightly around the waist and over the genitals, produces a warm and humid microenvironment favourable for the growth of numerous anthropophilic dermatophytes.6,7 In a case of dermatophyte infection localised exclusively on the penile shaft, reported by Italian authors,8 the pathogenic agent was Epidermophyton floccosum, which is also an anthropophilic fungus. To our knowledge this is the first case of penile involvement due to M canis, which is a zoophilic dermatophyte usually transmitted by animals to humans. In Europe, especially in the Mediterranean countries, the incidence of M canis infection has dramatically increased in the past 20 years. In Italy it has become the major infecting dermatophyte.9,10 M canis is generally acquired from cats (70%) of the cases) and more rarely from dogs; the infection mostly affects young debilitated animals.10 It is possible that in our patient, a veterinarian, the infection was correlated with his profession. The dermatophytic infection is not easily diagnosed and it is likely that it was an accidental autoinoculation. The unusual localisation of this fungal infection may give rise to problems of differential diagnosis with granuloma annulare, psoriasis, or even histoplasmosis. In the present case the one described here the execution of a specific examination for mycelia is suitable.

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Chronic balanitis: an unusual localisation of necrobiosis lipidica

Necrobiosis lipidica (NL) is a granulomatous disease with necrobiosis of the collagen fibres, that is strongly associated with diabetic mellitus.1 However, the condition is also seen in patients with no detectable disturbance of glucose metabolism. Typical lesions of NL often occur as small plaques with irregular, ovoid plaques with a violaceous, indurated periphery and a yellow central atrophic area.2 Ulceration occurs in approximately 35% and is often precipitated by minor trauma.

Recently, a 48 year old married man presented with a 4 year history of chronic balanitis. Physical examination revealed an inflammatory glans penis with painful and ulcerative lesions of the glans and the foreskin and residual depressed scars. No other locations were found. No lymph node or urethral discharge was seen.

Routine laboratory tests including complete blood cell function, hepatic tests, glycaemia, VDRL, TPHA, and urinalysis were normal. Fungus, bacteria, and virus cultures were negative. Cultures from the urethra (Chlamydia, Mycoplasma, Trichomonas vaginalis) were negative. A first biopsy of the lesions was non-significant.

Local antibacterial, and antifungal treatment and corticosteroids were ineffective.

A punch biopsy was performed. Histological examination showed a granulomatous inflammatory infiltrate of the upper and mid-dermis, consisting of large foci of mucous degeneration of the collagen surrounded by histiocytes, epithelioid and giant cells. These findings are compatible with necrobiosis lipidica. A significant improvement of the lesions was seen after 1 month.

Only four cases with genital localisation have been reported in the literature.3,4 Diagnosis was made by histology. In all cases, there were identical features of recurrent painful ulcers that healed with depressed scars and which showed necrotic collagen and palisading granuloma on histology. Syphilis and tuberculosis may be discussed as differential diagnosis.

No definitive treatment for NL seems to be effective. Pentoxifylline, aspirin, and dihydropyrimidine have been reported to be effective. In our patient, the foreskin was extremely affected by the disease and circumcision was indicated.

We emphasise that necrobiosis lipidica should be considered as a differential diagnosis of recurrent painful penile ulcers.

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