

## Report

**Syphilitic balanitis of Follmann**

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E-mail: marius\_irimie2002@yahoo.comConflicts of Interest: There is no conflict of  
interest to declare.**Abstract****Background** Syphilitic balanitis of Follmann (SBF) is a rare condition that is considered as manifestation of primary syphilis.**Materials and methods** A 28-year-old heterosexual male patient was consulted for a diffuse indurated dark red erythema of the glans penis accompanied by bilateral inguinal lymphadenopathy. Serological tests for syphilis were found positive. Treatment consisting of a single intramuscular administration of 2.4 million units of benzathine-penicillin was followed by complete disappearance of erythema and induration of the glans within two weeks.**Results** Syphilitic balanitis of Follmann presents with variable clinical appearances, and primary chancre may be absent, associated with, or occur after the balanitis. Usually the inguinal lymphadenopathy is present, and syphilitic serology is positive or is going to become positive. Treatment is identical to that of primary syphilis.**Conclusion** The recrudescence of syphilitic infection requires exclusion of SBF from the diagnosis of balanitis.**Introduction**

Syphilitic balanitis of Follmann (SBF) is a rare condition that is considered as manifestation of primary syphilis. First described by Follmann, a Hungarian dermatologist, SBF has variable clinical aspects, and syphilitic chancre may be absent, associated with, or follow the SBF. We present the case of a young male patient diagnosed with SBF.

**Clinical case**

A 28-year-old heterosexual male patient presented with a balanitis that had lasted for 10 days. Physical examination revealed an indurated dark red erythema that covered the entire glans penis (Fig. 1) accompanied by bilateral inguinal lymphadenopathy with painless lymph nodes up to 1 cm in size. Dark field microscopy was negative, and serological tests for syphilis were positive, with *Treponema pallidum* hemagglutination assay (TPHA) and Venereal Disease Research Laboratory (VDRL) results of 1 : 1280 and 1 : 64, respectively. Microscopic examination for *Trichomonas*, bacteriological, mycological, and *herpes simplex virus* (HSV) cultures was negative. Chlamydia and human immunodeficiency virus (HIV) serology were also negative. The patient refused skin biopsy. Treatment performed by a single intramuscular injection of 2.4 million units of benzathine-penicillin led to the complete disappearance of erythema and induration of the glans penis within two weeks. The clinical appearance, correlated with positive serology and favorable

response to treatment for syphilis lesions, allowed us to support the diagnosis of SBF.

**Discussion**

The term balanitis includes inflammation of the glans of various causes (allergic, irritant, infectious, and idiopathic) plus damage of the glans within specific dermatoses. Several pathogens are involved in the development of infectious balanitis, such as fungal, bacterial, anaerobic, parasitic, or viral agents.

Syphilitic balanitis was first mentioned by Eugene Follmann,<sup>1</sup> and subsequently this condition took his name. Follmann considered the incidence of balanitis within the



**Figure 1** Indurated dark red erythema of the glans penis

0.3–0.5% of cases of primary syphilis. In the first three cases, he considered syphilitic balanitis as the primary symptom of syphilis mentioning the absence of the chancre,<sup>1</sup> it taking the appearance of erosive balanitis. *Treponema pallidum* was identified at dark field microscopy, and Bordet–Wasserman reaction became positive concomitantly or after the appearance of balanitis.<sup>1</sup>

Gougerot<sup>2</sup> considered that in the pathogenesis of syphilitic balanitis, besides *Treponema pallidum* action, fusospirilli would also be involved. Pagès and Freyria<sup>3</sup> in 1953 concluded that SBF is a very rare condition. In 1970, Degos,<sup>4</sup> describing the aspects of primo-secondary syphilis, mentioned the term syphilome diffus primaire as scaly and indurated area of dark red color, that may include the entire glans penis, sometimes associated with syphilitic chancre.

Subsequently, in the literature, publications about SBF have been rare. Lejman and Starzycki<sup>5</sup> published in 1975 a patient whose balanitis was preceded by the appearance of syphilitic chancre. The same authors have explained the pathogenesis of SBF considering it is due to an active penetration of *Treponema pallidum* through the epidermis with an hematogenous origin, and intraepidermal proliferation of this would lead to a massive accumulation of *Treponema pallidum* (analogous to condyloma lata).<sup>5</sup> Babu *et al.*<sup>6</sup> reported two cases of SBF in two homosexual patients, including one with HIV-positive serology. Abdennader *et al.*,<sup>7</sup> over 19 years, have diagnosed three patients with erosive SBF, of which only one was associated with a syphilitic chancre. The authors mention skin induration of the glans penis as a particular clinical feature in these patients. *Treponema pallidum* detection, fungal, bacterial, and viral investigations in these patients were negative. The presence of *Staphylococcus aureus* in one patient was considered a secondary infection.<sup>7</sup> In our case, SBF was manifested as a dark red erythema, slight indurated, of the entire glans penis, but the syphilitic chancre was not observed.

At present, SBF is rare but must be considered under recrudescence of syphilitic infection. Observing SBF cases reported in the literature, as well as Abdennader,<sup>8</sup> we can note the features of this disease. SBF is considered a manifestation of primary syphilis as well as syphilitic chancre.<sup>1,3</sup> The clinical appearance is variable, glans penis appearing edematous with the presence of a dark red erythema that can cover the whole glans,<sup>4</sup> showing erosions or partially coalescent smooth white papules and plaques on the surface.<sup>1,3,5,7</sup> Diffuse induration of the glans penis is sometimes present.<sup>7</sup> Syphilitic chancre may be absent, associated with or occur after the balanitis, but inguinal lymphadenopathy is usually present.<sup>1,4,5,7</sup>

The diagnosis of SBF is confirmed by the presence of *Treponema pallidum* on dark field microscopy and/or on

histopathology using silver impregnation stain,<sup>5</sup> and syphilitic serology is positive or is going to become positive.<sup>1,3,7</sup> Diagnosis of SBF requires the exclusion of lesions of secondary syphilis and balanoposthitis produced by other infectious pathogens, such as *Candida albicans*, group B streptococci, anaerobes, herpes simplex virus, etc.

Treatment is identical to that of primary syphilis consisting of a single dose of 2.4 million units of benzathinepenicillin administered intramuscularly followed by complete cure of balanitis. According to some authors, this dose may not be sufficient in HIV-positive patients.<sup>9,10</sup>

As in Follmann's princeps cases,<sup>1</sup> in our case balanitis was not associated with the presence of the chancre, and the indurated dark red erythema reminds of the appearance described by Degos as *syphilome diffus primaire*.<sup>4</sup> The clinical aspect of the glans, in a context of positive serology for syphilis and disappearance of erythema and induration two weeks after treatment with benzathinepenicillin, allowed us to diagnose the case as SBF even without histopathological examination.

## Conclusion

In terms of recrudescence of the syphilis infection, the diagnosis of balanitis requires exclusion of SBF by performing dark field microscopy and serology for syphilis.

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