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Authors
Ferrer Guillén, Blanca
Giácaman, María Macarena
Hernández Bel, Pablo
et al.

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Whitish vulvar tumors associated with macular symmetrical rash

Blanca Ferrer Guillén, María Macarena Giácaman, Pablo Hernández Bel, Amparo Pérez Ferriols

Affiliations: University General Hospital of Valencia, Valencia, Spain

Corresponding Author: Blanca Ferrer Guillén, Avenida Aragón 13, 1A, Valencia 46010, Spain, Email: blanca.ferrerguillen@gmail.com

Abstract

We present a woman with an unusual case of secondary syphilis after an unnoticed primary infection. She initially presented with multiple grayish plaques and nodules on the vulva associated with an erythematous macular symmetrical rash affecting the trunk and extremities. Despite the increasing incidence of sexually transmitted diseases such as syphilis, presentation with unusual manifestations can lead to a delayed diagnosis.

Keywords: condyloma latum, genital disease, treponema pallidum, secondary syphilis, sexually transmitted disease, syphilis

Introduction

Syphilis is a sexually transmitted disease whose incidence has been increasing. Primary syphilis characteristically presents with a painless chancre on the genital, oral, or anal mucosa associated with bilateral painless lymphadenopathy, which can be unnoticed. Secondary syphilis occurs 4-to-10 weeks after the appearance of the primary lesion and involves dissemination of spirochetes. Cutaneous manifestations occur in 80% of patients with secondary syphilis and are usually preceded by prodromic constitutional symptoms. The most typical presentation is a generalized erythematous macular and papular non pruritic symmetrical eruption also affecting palms and soles. Although most lesions of secondary syphilis are asymptomatic, 42% of patients can experience pruritus. Other manifestations of secondary syphilis include condyloma latum, mucous plaques, pharyngitis, moth-eaten alopecia, and ocular involvement [1].

Case Synopsis

A 40-year-old woman referred from the gynecology department exhibited multiple tumors on the vulva. The patient reported a history of multiple pruritic vulvar lesions, which had appeared 15 days before, associated with a slightly pruritic macular rash on the trunk and extremities. Her medical history was significant for hepatic cirrhosis caused by hepatitis C virus (HCV) treated 2 years prior. She admitted to

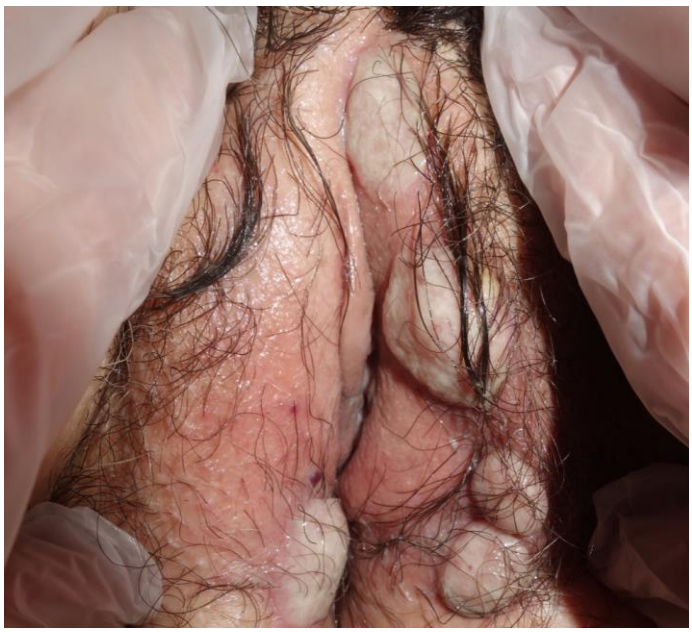

Figure 1. *Multiple 10-to-20mm plaques and nodules with a whitish-to-grayish flat surface on the vulva.*

having had unprotected intercourse two months before the appearance of the lesions.

Physical examination revealed multiple 10-to-20mm plaques and nodules with a whitish to grayish flat surface on the vulva (**Figure 1**). She also presented with an erythematous macular symmetrical rash affecting the trunk and extremities. Palms and soles were spared. Enlargement of lymph nodes or systemic symptoms were absent.

A punch biopsy was obtained from a vulvar lesion. Histopathological examination revealed an intraepidermal pustular dermatitis and a dermal infiltrate composed of lymphocytes and plasma cells, suggestive of condyloma latum (**Figure 2**). The presence of spirochetes corresponding to *Treponema pallidum* was confirmed by immunohistochemistry showing an epidermotropic arrangement (**Figure 3**).

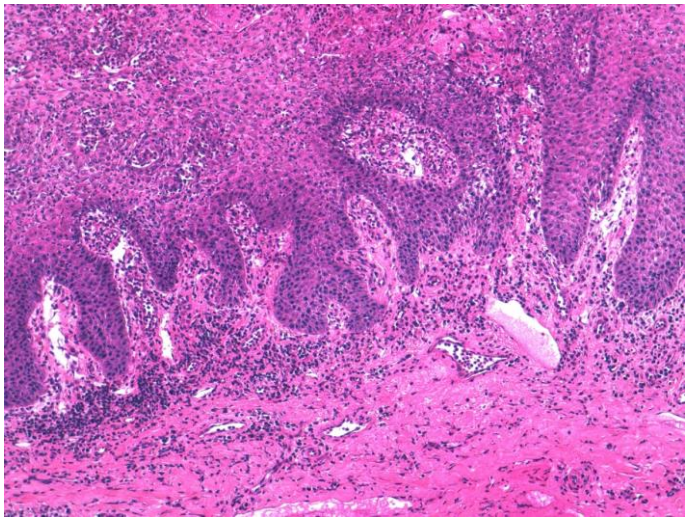

Figure 2. *Skin biopsy. Intraepidermal pustular dermatitis with a dermal infiltrate composed of lymphocytes and plasma cells. H&E, 100×.*

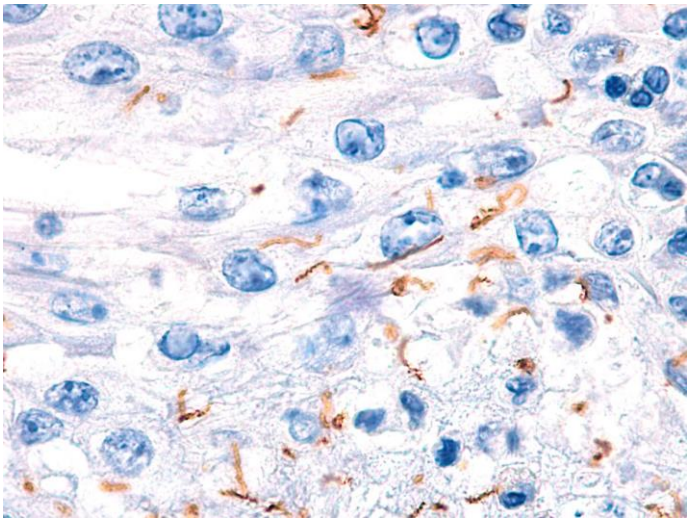

Figure 3. *Skin biopsy. Immunohistochemistry stain. Spiroid structures showing an epidermotropic arrangement, 200×.*

Laboratory tests showed rapid plasma reagin (RPR) 1/128, positive fluorescent treponemal antibody absortion test (FTA-Abs), and positive total antibodies against *Treponema pallidum*. Other laboratory findings included a past HCV and negative HCB, HIV, and chlamydia serologies. A polymerase chain reaction (PCR) for *Treponema pallidum* was performed on the cutaneous exudate from vulvar lesions and in the biopsy, with positive result in both samples.

The diagnosis of secondary syphilis was confirmed and the patient received a single intramuscular injection of 2.4 million units of penicillin G benzathine.

One week after treatment the patient showed significant improvement of condyloma latum (**Figure 4**) and after 2 months she had achieved a complete resolution of the condylomata and the rash. Serologies performed 2 months after treatment resulted in an improved RPR at 1/32.

Case Discussion

Secondary syphilis is a great imitator both clinically and histopathologically [2-4]. It can clinically mimic granuloma annulare, lupus vulgaris, psoriasis, lichen planus, sarcoidosis, leprosy, lymphoma, mycobacterial infection, fungus infections, drug eruptions, erythema gyratum or multiforme, and tumors [1, 2].

Condyloma latum is an unusual manifestation of secondary syphilis and represent the most infectious skin lesion. The differential diagnosis between condyloma latum, condyloma acuminate, and tumorals, such as bowenoid papulosis and squamous cell carcinoma is essential (**Table 1**), [3, 4].

Histopathologic features of secondary syphilis include acanthosis, spongiosis or parakeratosis with

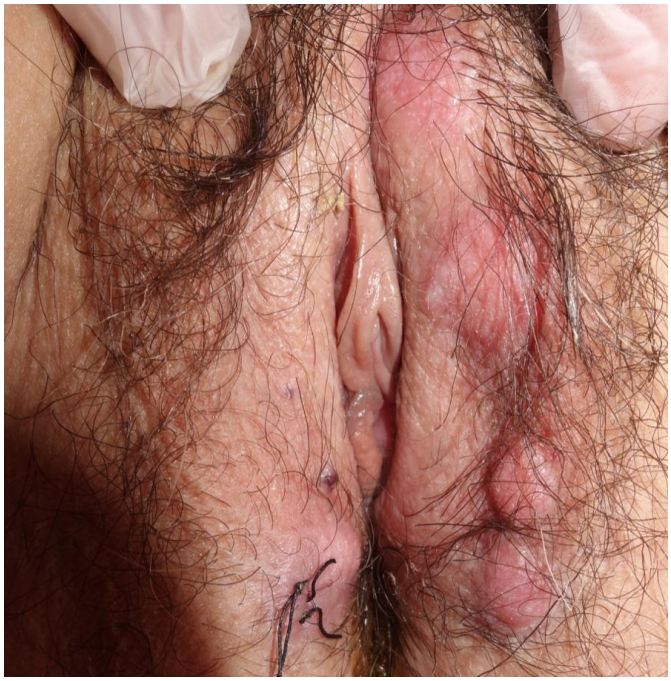

Figure 4. *Significative improvement of condyloma latum one week after treatment.*

a dermal infiltrate composed of lymphocytes, histiocytes and plasma cells. Blood vessels tend to be thickened with swollen endothelial cells.

Regarding diagnosis, reaginic tests are non-specific but always reactive in secondary syphilis. An increase of titers in reaginic tests suggests recurrence or reinfection. Although it is infrequent, one must remember the prozone phenomenon, a false negative result related to a high antibody titer, especially in HIV patients. We perform serial dilutions in all patients with suspected syphilis in order to avoid the prozone phenomenon. Treponemal tests have high sensitivity and specificity and are useful to confirm the diagnosis but do not correlate with disease activity. We perform FTA-Abs in all patients with suspected syphilis as this is the most specific test. Spirochetes can be observed either by immunohistochemistry stain or by dark-field examination in exudate from skin or mucous lesions. We perform PCR for *Treponema pallidum* in exudative lesions.

Conclusion

The incidence of syphilis is increasing and its diagnosis is often delayed when unusual skin lesions are present. It is essential to be aware of atypical manifestations and maintain a high index of suspicion in order to achieve a prompt diagnosis and treatment to avoid transmission and long term neurological or cardiovascular complications.

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