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An impressive genital eruption in a young man: secondary syphilis

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Abstract

A 24-year-old man presented to our department with multiple genital lesions. Over the glans surface and around the body of the penis multiple malodorous, indolent grey-white papules were observed. Scaly copper colored papules were located on the palms and soles. Based on physical examination and results of blood tests, a diagnosis of secondary syphilis was made. Syphilis is the "great imitator" of skin diseases. Young clinicians are infrequently familiar with the different clinical pictures of syphilis. Although condyloma lata are relatively rare manifestations of secondary stage, occasionally they can be the only or predominant sign.

Keywords

syphilis; condyloma lata; secondary syphilis; genital eruption

Introduction

Syphilitic infection rates among men who have sex with men resulted high before the 1980s, successively dropped during 80s and early 90s as the result of the adoption of safer sexual behaviours in response to HIV outbreak [1]. Thus, it was regarded a rare disease until the first years of the new millennium. This datum may explain why syphilis raised little interest among young clinicians of different specialties, who rarely faced the protean clinical aspects of the disease. In the last years a resurgence has been observed such within the homosexual communities as among heterosexual individuals, probably due to little awareness and lack of cultural specific information. From this recent new outbreak may result a heavy impact on public health, mostly because *Treponema pallidum* infection represents a well-known risk factor for HIV transmission [2].

Case Report

A 24-year-old man was referred to our department with multiple lesions that had developed over the glans and body of the penis three weeks prior. Genital eruption was accompanied by fever and sore throat. At the visit, the patient was afebrile but a generalized indolent lymphadenopathy was present. A 24-year-old man was referred to our department with multiple lesions that had developed over the glans and body of the penis three weeks prior. Genital eruption was accompanied by fever and sore throat. At the visit, the patient was afebrile but a generalized indolent lymphadenopathy was present. Multiple flat,

grey-white indolent papules were located over the glans mucosa and around the body of the penis (figure 1). Some were eroded and covered by a greyish malodorous exudate (figure 2). Conversely the trunk and limbs were spared. Few small scaly, copper colored, papules were observed on the palms (figure 3). Similar more numerous partially coalescing elements, were present over the soles (figure 4). He was not aware of these accompanying lesions.

The patient had a history of unprotected sexual contacts. Based on sexual history and clinical manifestations, namely condyloma lata, diagnosis of secondary syphilis was suspected. VDRL was positive to a dilution of 1:128 and the fluorescent treponemal antibody absorption test was positive. HIV-1 and HIV-2 serology were both negative. The patient was thus treated first with a two weeks course of doxycycline 100 mg twice daily, and then a single doses of 2.4 million units intramuscular benzathine penicillin G.

Discussion

Sir William Osler defined syphilis as the "great imitator" of skin diseases. Its protean cutaneous manifestations and extra-cutaneous involvement have been summarized in Table 1.

An average of 21 days after sexual contact with an infected individual a skin lesion, so-called "chancre" (a firm, painless skin ulceration with a clean base and sharp borders) appears at the point of infection. Occasionally, multiple lesions may be present and occur in places other than the genitals: anus, oropharynx, tongue, nipples, fingers. Primary siphilis ulcer may persist for three to six weeks without treatment, and then disappear.

Secondary eruption is often generalized and distributed symmetrically, though sometimes it can be lacking [3] or incomplete, involving just some body segments such as extremities, as occurred in our case.

A widespread macular rash, roseola syphilitica, represents the first clinical sign in most patients with secondary syphilis. Typically it appears on the side of the trunk and then spreads over the body surface. If not recognized, roseola disappears in seven-ten days. Antibiotic administration can trigger or exacerbate the skin rash, leading clinicians to formulate a diagnosis of cutaneous drug reaction. Jarisch-Herxheimer reaction is caused by massive death of Treponema pallidum induced by certain antibiotic drugs (first penicillin antibiotic drugs) and resultant release of inflammatory cytokines.

After a period of apparent wellness, papular syphilis appears as a non-pruritic symmetrical rash almost always involving forehead and face, palms and soles. Lenticular lesions can show a peripheral scaly ring that is more evident on palms and soles. When this morphological feature is evident on the trunk, clinicians must differentiate papular syphilis from Gibert's pytiriasis rosea. Although papular eruption over palms and soles is considered a hallmark of secondary syphilis, sometimes it might not be observed, even when skin rash is profuse.

Late secondary eruption can show different features. Necrotic modifications occurring inside the inflammatory infiltrate cause the eruption of papulo-necrotic elements. Papulo-necrotic syphilis is also described as "pustular syphilis", but "pseudo-pustular" may be a more appropriate term because real pus is not present. When papulo-necrotic elements spread all over the trunk, the eruption acquires a "starry sky" pattern that resembles the blisters in different stages of chickenpox. When large crusted elements

are observed on the leg surface, the main differential diagnoses is pyodermitis such as ecthyma and forunculosis. If crusted elements are present on the inferior part of the face (chin and nasolabial folds) a diagnosis of impetigo may be made if a general physical examination is not completed.

Ulceronodular sysphilis (lues malignant) is an uncommon ulcerative variation of secondary syphilis usually found in HIV patients [4].

During the secondary stage, furthermore, blood dissemination occurs and various tissues can be involved, mimicking not only other dermatoses, but also rheumatic [5], neurological [6], ocular [7] and cardiovascular [8] diseases. Because of multi-organ dissemination of *Treponema pallidum*, flu-like symptoms, generalized lymphadenopathy and pharyngitis are often present, as observed in our patient.

Condyloma lata are rarely observed in dermatology clinics [9]. The common sites for condyloma lata are the genital and perianal areas where they are smooth and moist, often superinfected and malodorous. The main differential diagnosis to consider is condyloma acuminate [9] (caused by human papilloma virus). While condyloma acuminate appear often pedunculated, condyloma lata are papular elements with a large base and show superficial erosion.

Plaques opalines, white milky papules developing over the tongue, represent a form of secondary syphilis erupting on the mucous membranes and they are rarely observed [10]. A great variety of lesions can be observed during the examination of the oral cavity, including aphthoid lesions [11]. Hypertrophic white papules, when arising on the lateral surface of the tongue, may mimic hairy leukoplakia in HIV patients.

If left untreated, approximately 3 to 15 years after the initial infection a third of infected people develop tertiary disease, affecting skin (gummatous syphilis) nervous system (meningitis, tabes dorsalis, dementia) or cardiovascular system (luetic aortitis).

Conclusion

In conclusion, since syphilis manifestations and particularly secondary stage show a great polymorphism, clinicians of all specialties must maintain a high index of suspicion in patients with unusual clinical features to establish the diagnosis, especially because of the increasing incidence of syphilis in Europe and other parts of the world.

Figures

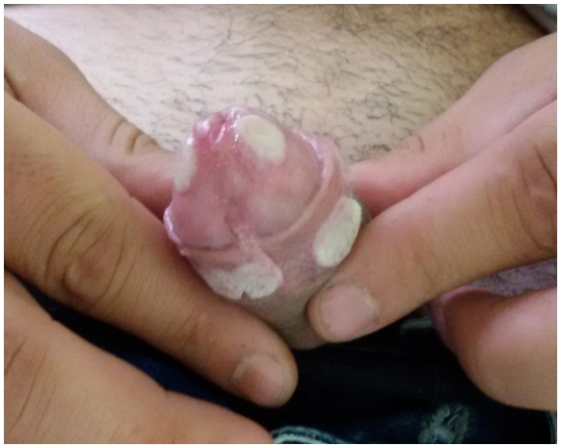

Figure 1: Malodourous eruption of large, white-greyish papules over genital mucosa and skin.

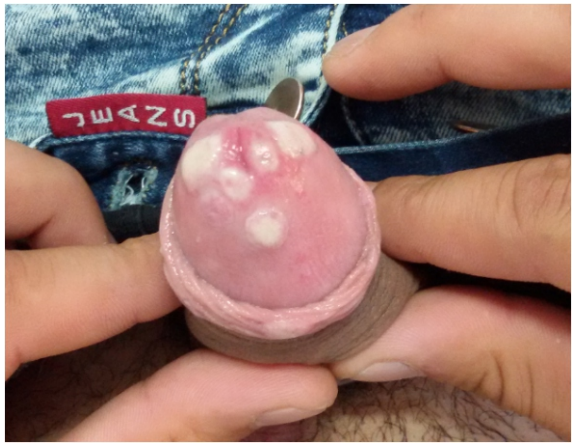

Figure 2: Papular elements smaller in size and superficially eroded present around the external urethral meatus.

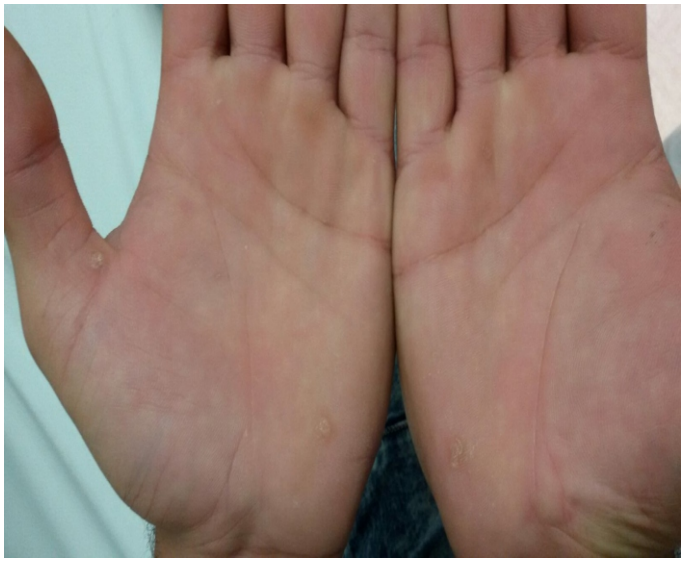

Figure 3: Few scaly papules observed over the palms.

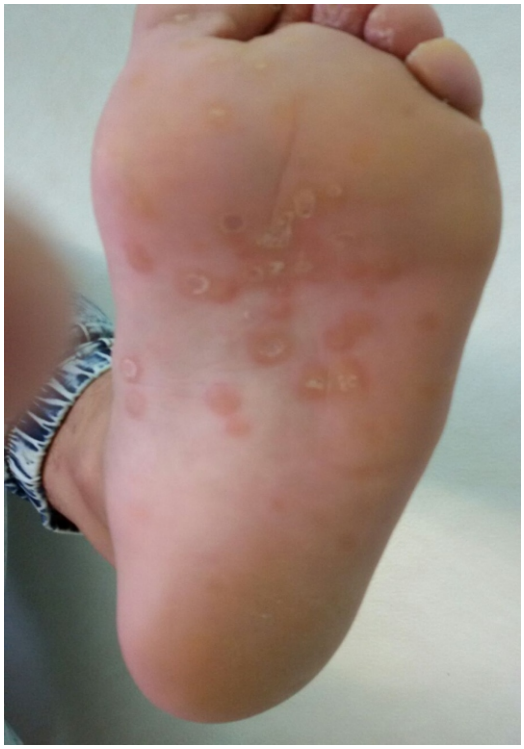

Figure 4: Numerous indolent copper colored elements, hallmark of secondary syphilis, symmetrically distributed on the plantar surfaces. The patient was not aware of this cutaneous eruption.

Table

STAGE	MUCO-CUTANEOUS CLINICAL PRESENTATIONS	INVOLVEMENT OF OTHER ORGANS
PRIMARY	Syphilitic ulcer (chancre)	Loco-regional lymphnodes
SECONDARY	• Macular syphilis (roseola) • Papular lenticular syphiloderma • Lichenoid • Psoriasiform • Rupioid • Papulo-necrotic • Malignant syphilis (HIV patients) • Hair loss ("moth-eaten alopecia") Condyloma lata	• Upper respiratory tract • Lymphnodes • Eye • Central nervous system • Gastro-intestinal system • Osteo-articular system
TERTIARY	Gummatous syphilis	• Central nervous system • Cardiovascular system