

Secondary syphilis presenting as *Syphilide psoriasiforme*: lessons from the older syphilology literature

Carlos José Martins¹, Ricardo Barbosa Lima¹, Walter de Araujo Eyer-Silva¹, Camila Bastos Almenara¹, Isabelle Carvalho-Rangel¹, Ricardo de Souza Carvalho¹, Rodrigo Panno Basílio-de-Oliveira¹, Luciana Ferreira de Araujo¹, Fernando Raphael de Almeida Ferry¹, Leila Rangel da Silva¹

ABSTRACT

It is essential for health care providers to be familiar with the full spectrum of clinical presentations of syphilis. We present herein a case of *syphilide psoriasiforme*, an uncommon but well recognized clinical presentation of secondary syphilis. A 46-year-old HIV-infected female patient was referred to our attention with a presumptive diagnosis of palmoplantar psoriasis. On examination, there were exuberant pinkish-red papules and plaques covered with a thick silvery scale in the palms, flexor surfaces of the wrists, and the medial longitudinal arches of the feet. Serological and histopathological analyses uncovered the diagnosis of syphilis. Clinical remission was obtained after treatment. A detailed review of the literature on *syphilide psoriasiforme*, including descriptions from older syphilology texts is provided. The present case report emphasizes the need for clinicians to have a heightened awareness of the varied and unusual clinical phenotypes of syphilis.

KEYWORDS: HIV infection. *Syphilide palmaire et plantaire*. *Syphilide psoriasiforme*. Secondary syphilis.

Acquired syphilis is a sexually transmitted infection caused by the spirochete *Treponema pallidum*, subspecies *pallidum*. It has a triphasic natural history in which a secondary stage of florid mucocutaneous manifestations follows a primary ulcer (chancre), and precedes a tertiary stage of a slowly progressive, destructive inflammatory process that can affect any organ. Syphilis has been appropriately termed “the great imitator” due to its heterogeneity of presentation and mimicry of other conditions. We present herein a case of *syphilide psoriasiforme*, an uncommon but well recognized clinical presentation of secondary syphilis.

A 46-year-old HIV-infected female patient presented with a five-month history of non-pruritic, erythematous and lightly scaling plaques over the palms and soles, mainly the medial longitudinal arches of the feet (Figure 1). She had a diagnosis of HIV infection made 6 years before and a long history of poor adherence to antiretroviral treatment. Her current treatment combination was lamivudine, tenofovir and ritonavir-boosted atazanavir. She was also on sulfamethoxazole-trimethoprim as prophylaxis of opportunistic complications and risperidone for a bipolar disorder. Her current CD4 cell count was 141 cells/mm³ and the plasma HIV viral load was 80 copies/mL (1.9 log), which indicated ongoing viral replication, albeit at a value close to the lower limit of detection of the assay (40 copies/mL). A rapid point-of-care syphilis test was reported to be negative,

¹Universidade Federal do Estado do Rio de Janeiro, Hospital Universitário Gaffrée e Guinle, Centro de Ciências Biológicas e da Saúde, Rio de Janeiro, Rio de Janeiro, Brazil

Correspondence to: Carlos José Martins Hospital Universitário Gaffrée e Guinle, Ambulatório de Dermatologia, Rua Mariz e Barros, 775, CEP 20270-004, Rio de Janeiro, RJ, Brazil

E-mail: carlosmartins23@gmail.com

Received: 7 January 2020

Accepted: 20 February 2020

as well as previous serological tests for syphilis. The skin lesions were treated with fluconazole and prednisone at another facility, but the lesions did not remit. Two months later, there were new lesions and the previous ones were larger and tender (Figure 2). She was then referred to our attention with a presumptive diagnosis of palmoplantar psoriasis.

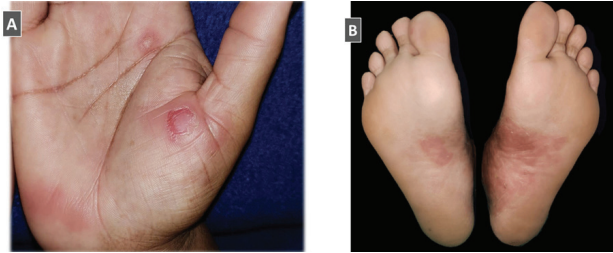


Figure 1 - Clinical images of a 46-year-old female patient. Erythematous and slightly scaly plaques are seen over the palms (A), soles and medial longitudinal arches of the feet (B).

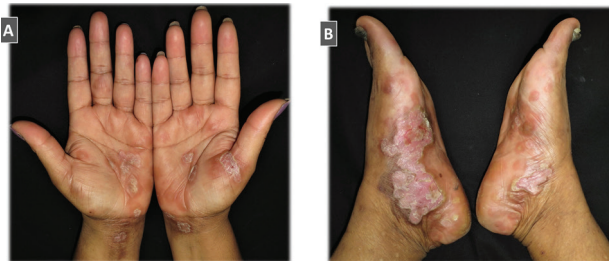


Figure 2 - Two months later there were exuberant pinkish-red scaly lesions on the palms, with circinate borders in the medial longitudinal arches of the feet.

On clinical examination, there were exuberant pinkish-red papules and plaques covered with a thick silvery scale in the palms and flexor surfaces of the wrists. In the medial longitudinal arches of the feet, there were large plaques with a thick silvery scale and circinate borders (Figure 2). There were no oral lesions or lymphadenopathy. Laboratory evaluation showed no serological evidence of hepatitis B or hepatitis C infections, but the Venereal Disease Research Laboratory (VDRL) titer was reactive at a titer of 1/128. A novel rapid point-of-care syphilis test was also positive. Histopathological analyses of skin biopsy samples revealed lichenoid dermatitis with perivascular inflammatory infiltrate in the reticular dermis, which was rich in plasmocytes (Figure 3). Spirochetal structures were uncovered by a Warthin-Starry staining (Figure 3C). Deepening the data of the patient's past history, the patient could not recall having had a primary chancre. A clinical diagnosis of secondary syphilis presenting as *syphilide psoriasiforme* was made. Skin lesions rapidly regressed after the administration of 2.4 million units of intramuscular benzathine penicillin G (Figure 4). The

VDRL titers dropped two-fold within three months. No Jarisch–Herxheimer reaction occurred.

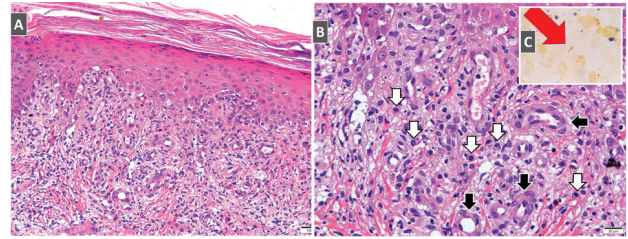


Figure 3 - Histopathological analyses of skin biopsy samples: A) Hematoxylin and eosin staining reveals hyperkeratosis, parakeratosis, cellular debris in the corneal layer, saw tooth acanthosis, vacuolization of the basal cell layer, apoptotic keratinocytes, as well as an inflammatory infiltrate composed of lymphocytes, macrophages and plasma cells in the dermo-epidermal junction. There are also melanophages in the superficial dermis. Original magnification: x 100; B) Hematoxylin and eosin staining shows an inflammatory infiltrate rich in plasmocytes (white arrows) and with abundant endothelial edema (black arrows). Original magnification: x 400; C) Warthin-Starry stain uncovers a spirochete.



Figure 4 - Complete remission of the lesions on the palms (A) and soles (B).

Few case reports of secondary syphilis simulating psoriasis are available on modern biomedical databases¹⁻⁷. Some of these patients were initially treated as psoriasis until a final diagnosis of syphilis was reached. Solak *et al.*³ reported the case of a 43-year-old male patient with *syphilide psoriasiforme* who was misdiagnosed and treated as palmoplantar psoriasis for 2 years. Similarly, Gianfaldoni *et al.*⁴ described the case of a 45 year-old male patient who was initially diagnosed and treated as a palmoplantar psoriasis before the correct diagnosis of *syphilide psoriasiforme* was made.

The older syphilology literature is rich in references on *syphilide psoriasiforme*. Authors from the XIX and early XX centuries observed that palm and sole syphilids are eventually covered by an intense scaling that give the lesions an overall psoriatic aspect⁸. Writing about his experience at the dermatology unit of Saint Louis Hospital in Paris in

the XIX century, Eugène Guibout reported the existence of a clinical phenotype of syphilis that he named *psoriasis syphilitique* or *syphilide psoriasiforme*, which could be either a manifestation of early or late syphilis⁹. He stressed that his observations on the syphilitic nature of the lesions “leave no doubt on this respect”⁹. Writing earlier in the XIX century, Alfred Hardy had pointed out in his *Leçons sur les Maladies de la Peau* that “*psoriasis syphilitique* has a preference for the hands and feet”¹⁰.

In his *Traité de la Syphilis*, Alfred Fournier proposed that the condition be named *syphilide psoriasiforme*, as he considered *psoriasis syphilitique* “a hateful term”¹¹. He explained that *syphilide psoriasiforme* is a variety of the papular syphilide. Papular syphilitic lesions may present with variable degrees of scaling. Most commonly, a thin grayish or whitish scale covers the papule that may form the so-called *collerette de Bielt* when the lamellae fractures circularly. In some rare situations, however, the covering scale “becomes abundant, if not overabundant”. As he explained, the papule is then “overcome by a thick and adherent white crust” and “definitely assumes the physiognomy of psoriasis, as testified by several (wax) specimens conserved at Saint-Louis Hospital Museum” (Figure 5). He then explained that “it is impossible not to consider these lesions as psoriasis at a first glance”¹¹.

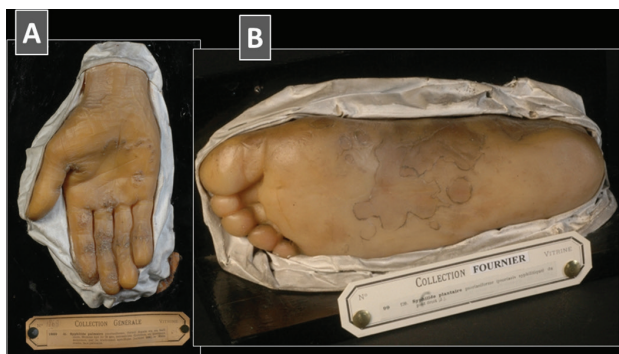


Figure 5 - Dermatological wax moulage models of *syphilide psoriasiforme* rash from Musée des Moulages, Hôpital Saint-Louis, Paris: A) *Syphilide palmaire psoriasiforme*; B) *Syphilide plantaire psoriasiforme*. Reproduced with permission (©F. Marin, P.Simon, Musée des Moulages, Hôpital Saint-Louis, Paris, AP-HP).

Still in his *Traité de la Syphilis*, Fournier classified the papular syphilids according to their site of presentation. One of these varieties is the *syphilide palmaire et plantaire*¹¹. Again, he refuted any terminology that might suggest a psoriatic etiology of such disorder. This clinical variety of secondary syphilis has three main characteristics: the presence of lesions exclusively on the hands and feet, the remarkable symmetry of the lesions and the existence of lesions in both hands and both feet (even though some

patients have lesions only on the hands or only on the feet). Fournier also observed the distress experienced by the crackling and fissuring of the palmar lesions of the patients whose activities involve manual labor, such as laundresses, diggers and blacksmiths. Plantar lesions have a preference for the medial part of the soles. These plantar lesions persist for some time simply as “reddish, pink-grayish or pink-yellowish stains” that are so faint that in some patients “need to be guessed” (Figure 5), reminding us of our patient’s initial presentation (Figure 1B). The dorsal aspects of the hands and feet are not affected. Fournier then asked “why?”. Only to answer himself: “I ignore”¹¹.

It should be kept in mind that secondary syphilis may supervene on a patient with a previous diagnosis of psoriasis. Palmoplantar lesions of *psoriasis guttata* have been found to clinically similar to secondary syphilis¹². Additionally, secondary syphilis may be a trigger for exacerbation of psoriasis¹³. As pointed out by John H. Stokes in the 1934 edition of his classic treaty *Modern Clinical Syphilology*, some of the features that aid in distinguishing psoriatic lesions from secondary syphilis include the presence of scalp, elbow and knee lesions, the occurrence of polymorphic lesions, the emergence of minute hemorrhagic points on the curettage of the scale, and the psoriatic nail changes¹⁴.

The present case report on a *syphilide psoriasiforme* emphasizes the need for clinicians to have a heightened awareness of the varied and unusual clinical phenotypes of syphilis. The careful reading of classic syphilology authors may shed light on unusual and atypical presentations of syphilis that physicians may encounter nowadays.

AUTHORS’ CONTRIBUTIONS

CJM, RBL, and WAES proposed the publication of the case; WAES drafted the manuscript; CJM, RBL, WAES, CBA, ICR, RSC, FRAF, and LRS took part in the clinical management of the patient; RPBO and LFA performed the histopathological analyses. All the authors revised the literature and provided important contributions to conception, design, acquisition of data, analysis, interpretation and intellectual contributions to the final version.

CONFLICT OF INTERESTS

The authors declare there is no conflict of interests.

FINANCIAL SUPPORT

None.

INFORMED CONSENT

The signed informed consent of the patient was obtained for publication of the case and accompanying images.

REFERENCES

1. Periti I, Zendri E, Ficarelli E, Masotti A, De Panfilis G. Psoriasiform eruption and pharyngitis. *Arch Dermatol.* 2008;144:255-60.
2. Bittencourt MJ, Brito AC, Nascimento BA, Carvalho AH, Nascimento MD. A case of secondary syphilis mimicking palmoplantar psoriasis in HIV infected patient. *An Bras Dermatol.* 2015;90 Suppl 1:216-9.
3. Solak B, Kara RO, Erdem T. Palmoplantar syphilis misdiagnosed and treated as palmoplantar psoriasis for 2 years. *J Family Med Prim Care.* 2016;5:506.
4. Gianfaldoni S, Tchernev G, Wollina U, Gianfaldoni R, Lotti T. Secondary syphilis presenting as palmoplantar psoriasis. *Open Access Maced J Med Sci.* 2017;5:445-7.
5. Freitas DM, Azevedo A, Pinheiro G, Ribeiro R. Psoriasiform papules, condyloma lata, lung nodules and hepatitis: the enormous variability of secondary syphilis manifestations. *BMJ Case Rep.* 2017;2017:bcr-2017-219408.
6. Arif T, Adil M, Amin SS, Saeed N. Psoriasiform lesions of glans and palms: a rare presentation in secondary syphilis. *Indian J Sex Transm Dis AIDS.* 2019;40:70-2.
7. Peng RR, Shang S, Chen J, Shi M, Long FQ. Delayed onset and protracted course of psoriasis-like secondary syphilitic lesions in a HIV-sero-positive man who has sex with men: a case report. *Acta Derm Venereol.* 2019;99:1197-8.
8. Galtier-Boissière EM. *Larousse médical illustré.* Paris: Larousse; 1924.
9. Guibout E. *Traité pratique des maladies de la peau: diagnostic et traitement.* Paris: G. Masson; 1885.
10. Hardy A. *Leçons sur les maladies de la peau: professées a L'Hôpital Saint-Louis.* Paris: A. Delahaye, F. Chamerot; 1860.
11. Fournier A. *Traité de la syphilis. Tome I: période primaire - période secondaire.* Paris: J. Rueff; 1906.
12. High WA, Hoang MP, Bergstresser PR. Psoriasis guttata with palmoplantar involvement clinically mimicking secondary syphilis. *Cutis.* 2005;76:358-60.
13. Kumar VS, Saradha KP, Anandan V, Kumar MM, Kalpana AS. Coexistence of syphilis and psoriasis. *J Evolution Med Dent Sci.* 2016;5:2944-5.
14. Stokes JH. *Modern clinical syphilology: diagnosis, treatment, case studies.* 2nd ed. Philadelphia: W. B. Saunders; 1934.