Annals of Clinical Case Reports

Case Report
Published: 05 Sep, 2022

Urticariform Lesions as a Manifestation of Secondary Syphilis: Case Report

*Raquel Keller, Letícia de Aquino Santos Furlan and Gabriela Solera**

Department of Surgery, Distance State University of Costa Rica, Brazil

Abstract

In recent years, syphilis has grown again with alarming numbers, not only in Brazil, but worldwide. In October 2016, the Ministry of Health recognized that the situation was getting out of hand and declared an epidemic. Most cases are in the Southeast region (56%), the most urbanized and developed in the country. The disease that previously affected the poorest population, today affects all social classes. Syphilis is caused by a bacterium, *Treponema pallidum*, and the group of people affected by it is mainly young adults, however, it is also present in the elderly and in pre-adolescents. The authors report a case of manifestation of urticarial lesions in secondary syphilis.

Keywords: Urticariform lesions; Syphili; *Treponema pallidum*

Introduction

Syphilis is a disease that may have no symptoms or manifest in 3 stages. Its primary form usually presents as a single lesion, where the *Treponema* is inoculated, painless, and small, ulcerated and poorly secreting base, known as hard chancre. The disease that previously affected the poorest population, today affects all social classes [1].

Syphilis is caused by a bacterium, *Treponema pallidum*, and the group of people affected by it is mainly young adults, however, it is also present in the elderly and in pre-adolescents [1].

After 10 to 90 days is the incubation period, the wound heals, even without treatment and follows the period known as secondary syphilis, when the hematogenous dissemination of *Treponema pallidum* occurs. In this phase, mucous plaques can appear: Extensive lesions that usually affect the oral mucosa, usually painless and very infectious. Classically, secondary syphilis is manifested by a bilateral and symmetrical papular eruption, affecting extensive areas of the body and usually reaching the palmar and plantar regions. Clearing alopecia, which is characterized by small areas of hair loss, without flaking and without a trophy, located predominantly in the parietal regions, is also a manifestation of secondary syphilis?

The tertiary manifestation is later, after many years of the primary infection, the patients, in this phase, manifest lesions that involve several systems, such as skin and mucous membranes, cardiovascular system and nervous system. The characteristic of tertiary lesions is the formation of destructive granulomas [2].

Case Presentation

We report a case of a 39-year-old patient who sought medical care complaining of red, itchy spots spread throughout the body. The patient had been treated with an intravenous steroid and a first-generation antihistamine; and as the lesions did not improve, he was referred to the dermatology service.

Dermatological examination showed erythemato edematous papules and plaques, not very pruritic, spread over the body, but sparing the palm plantar region and face. The patient reported that the lesions lasted longer than 24 h. The diagnostic hypothesis of vasculitis urticaria was raised and, then, serology for syphilis, HIV and blood count was collected. After 2 days, the patient reported that the pruritus had ceased, but the lesions continued. The HIV test was negative, but the serology for syphilis, the VDRL, was titrated at 1:350; confirming the diagnosis of secondary syphilis (Figure 1).

Discussion

Primary syphilis is characterized by the appearance of a single lesion, where the treponema

OPEN ACCESS

Correspondence:
Gabriela Solera, Department of Surgery, Distance State University of Costa Rica, Avenida Rio das Pedra, 2020, Brazil, Tel: (019) 992505656; E-mail: gabriela.solera@hotmail.com

Received Date: *18 Aug 2022*
Accepted Date: *01 Sep 2022*
Published Date: *05 Sep 2022*

Citation:
Keller R, de Aquino Santos Furlan L, Solera G. Urticariform Lesions as a Manifestation of Secondary Syphilis: Case Report. Ann Clin Case Rep. 2022; 7: 2297.

ISSN: 2474-1655.

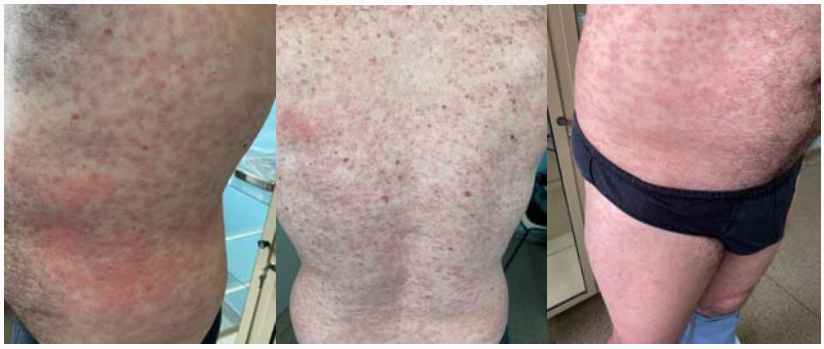

Figure 1: The patient was treated with Penicillin Benzatine 2,400,000 IU and after 15 days the lesions had completely disappeared.

is inoculated, painless, small, ulcerated and poorly secreting base, known as hard chancre, which often goes unnoticed by the patient and heals even without treatment. Spontaneous regression usually occurs between 3 and 6 weeks [3]. After that, a latency period occurs, in which the disease can progress to the secondary phase or remain without lesions.

After the latency period, which can last from six to eight weeks, the disease can start again, being called secondary syphilis. The involvement will affect the skin and internal organs corresponding to the distribution of *T. pallidum* throughout the body. On the skin, syphilis lesions occur in bursts and symmetrically. They may present in the form of erythematous macules (syphilitic roseola) of short duration. New outbreaks occur with erythematous-coppery papular lesions, rounded, with a flat surface, covered by discrete scales that are more intense on the periphery (Biett's collarette). The involvement of the palms and soles is very characteristic. On the face, papules tend to cluster around the nose and mouth, simulating seborrheic dermatitis. In blacks, facial lesions form annular configurations and circinations (elegant syphilides). In the inguinocrural region, papules subjected to friction and moisture can become vegetative and macerated, being rich in treponemes and highly contagious. In the oral mucosa, whitish vegetating lesions on an eroded base constitute the mucous plaques, also contagious. In some patients, diffuse alopecia is established, accentuated in the temporoparietal and occipital regions (clearing alopecia). There may also be loss of eyelashes and the final portion of the eyebrows. More rarely, at this stage, pustular, follicular and lichenoid lesions are described. Secondary schooling is accompanied by generalized polyadenomegaly. The general symptoms are discrete and uncharacteristic: Malaise, asthenia, anorexia, low-grade fever, headache, meningism, arthralgias, myalgias, periostitis, pharyngitis, hoarseness, hepatosplenomegaly, nephrotic syndrome, glomerulonephritis, auditory neuritis, and iridocyclitis [3].

Tertiary syphilis can appear up to 30 years after the initial illness, which is rare, because syphilis is often treated by schedule with other antibiotics used during the individual's lifetime. The patient may present with inflammation and tissue destruction, cardiovascular manifestations, neurosyphilis and gums in several organs.

Neurosyphilis arises when the bacterium invades the nervous system, reaching the brain, meninges and spinal cord. This complication usually arises after many years of living with the bacteria without proper treatment.

The transmission of syphilis is mostly (95%) through sexual intercourse, with direct contact with the lesions (hard chancre). It can also be the vertical route, at any time during pregnancy, when the bacterium passes from the mother to the fetus through the placenta, leading to congenital syphilis and which can cause fetal malformations. Another route of transmission is by sharing sharp objects between infected people. The risk of contagion ranges from 10% to 60% [2].

Treponemal tests are used to diagnose the disease, and will always be positive. The most used is FTA-Abs (Fluorescent Treponemal Antibody Absorption), but there is also TPHA (*Treponema pallidum* Hemagglutination), EQL (Electrochemiluminescence), ELISA (Enzyme Linked Immunosorbent Assay) and rapid (immunochromatographic) tests [3].

Non-treponemal tests are performed in titrations and are also used to monitor the course of treatment. The most used is the VDRL (Veneral Disease Research Laboratory), and its measurement for follow-up should be done only 3 months after the start of treatment, when it begins to decrease, indicating an adequate immune response to the treatment when it presents. A fall in titration at two dilutions within six months for recent syphilis and two dilutions within 12 months for late syphilis. Other non-treponemal tests are: The RPR (Rapid Plasma Reagin) and the TRUST (Toluidin Red Unheated Serum Test) [3].

It is recommended to start the investigation with a quick test and if the result is reactive, the VDRL should be done, if the result is positive, it could also be an active infection or only a serological scar, and the scar shows the non-treponemic test at low levels degrees. The VDRL is considered positive when it has a titer equal to or greater than 1/16, but lower titers such as 1/4 or 1/2 may indicate an active infection that requires treatment or a scar, therefore monitoring the baseline value is necessary of the non-treponemal test to assess whether there has been a reinfection.

The recommended treatment is benzathine penicillin G; The dose used for primary, secondary and recent latent syphilis (less than one year of evolution) is penicillin G benzathine 2.4 million IU, intramuscular, single dose (1.2 million IU in each buttock), or the alternative treatment, doxycycline 100 mg orally twice a day for 15 days (except pregnant women) or ceftriaxone 1 g intravenously or intramuscularly once a day for 8 to 10 days (in pregnant or non-pregnant women) [3]. late latent syphilis (with more than one year of evolution) or in tertiary syphilis, benzathine penicillin G 2.4 million IU, intramuscular, weekly, for 3 weeks, with a total dose of 7.2 million IU, or the alternative treatment, doxycycline 100 mg orally twice a day for 30 days (except pregnant women) or ceftriaxone 1

g intravenously or intramuscularly once a day for 8 to 10 days (in pregnant or non-pregnant women) [3]. And finally, in neurosyphilis, treatment is done with crystalline penicillin 18 to 24 million IU, intravenously, administered in doses of 3 to 4 million IU every 4 h or by continuous infusion, for 14 days, or ceftriaxone 2 g, intravenously or intramuscularly, once a day, for 10 to 14 days [2].

Conclusion

Urticarial lesions are not common in secondary syphilis; however, as named by Sir William Osler as the "great mimic", for presenting different clinical forms, we emphasize the importance of serology for syphilis in patients with a history of risk exposure. In addition to the need for a complete anamnesis in cases of urticaria, since, in this patient, the fact that the lesions were not very pruritic and lasted more than 24 h, alerted the physician to an investigation of a specific cause for the urticarial lesions.

References

1. Rivitti EA. Dermatologia de Sampaio e Rivitti Hardcover – 4th Ed. 2018.
2. Avelleira JCR, Bottino G. Sífilis: Diagnóstico, tratamento e controle. An Bras Dermatol. 2006;81(2):111-26.
3. Clinical Protocol and Therapeutic Guidelines for Comprehensive Care for People with Sexually Transmitted Infections (STIs), Ministry of Health 2020.