

Primary Syphilis Resembling Pyogenic Granuloma

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Primary syphilis is a sexually transmitted disease caused by the spirochete bacterium *Treponema pallidum*. Humans are the only natural hosts, and transmission occurs through sexual contact. Most disease manifestations are cutaneous, making it of great interest and importance to dermatologists. In primary syphilis, the lesion appears at the initial inoculation site, typically in the genital region¹. However, it can have an atypical presentation, especially at extragenital locations².

A 22-year-old male presented with a 2 cm-sized solitary erythematous erosive nodule in the suprapubic area present for approximately 1 week (Fig. 1). The asymptomatic lesion gradually increased in size and developed into an ulcer. He



Fig. 1. A solitary erythematous nodule with a central ulcer on the suprapubic area

had no systemic illness, past medical history, previous similar skin lesions, other mucocutaneous lesions, lymphadenopathy, and other symptoms including neurological symptoms.

A punch biopsy of the nodule was performed. The specimen showed a diffuse dermal infiltration consisting lymphocytes, plasma cells, and abundant neutrophils (Fig. 2A, 2B). Vascular endothelial cell swellings were numerous. Upon immunohistochemical analysis using the Warthin-Starry stain, scattered spirochete-like organisms were observed (Fig. 2C). Serologic test for automated rapid plasma reagin (RPR) was positive at 56.5 RU, and a diagnosis of syphilis was rendered. At the next visit, further laboratory studies were ordered, showing results of *Treponema pallidum* latex agglutination (TPLA) level of 290.70 TU and positive fluorescent treponemal antibody absorption (FTA-ABS) IgM and IgG. The patient was treated with 2.4 million units of benzathine penicillin intramuscularly. Three months later, the RPR and TPLA levels had decreased to 0.3 RU and 67.28 TU, respectively.

Primary syphilis is the first stage of syphilis and is characterized by the appearance of one or more chancres. The lesion typically presents as a dusky red macule that evolves into a papule or ulcer. At the inoculation site, the papule develops after an incubation period of 10~90 days.

Extragenital chancres occur mostly on the mouth, lips, and anus^{1,2}, but they can also be seen at any mucocutaneous site, with an estimated incidence ranging from 2% to 31%^{2,3}. The clinical manifestations of extragenital syphilis can be quite variable but are frequently painful and vary in size, shape, morphology, and color^{3,4}. Mucous patches with white-to-yellow erosions on the tongue and oral cavity can be present

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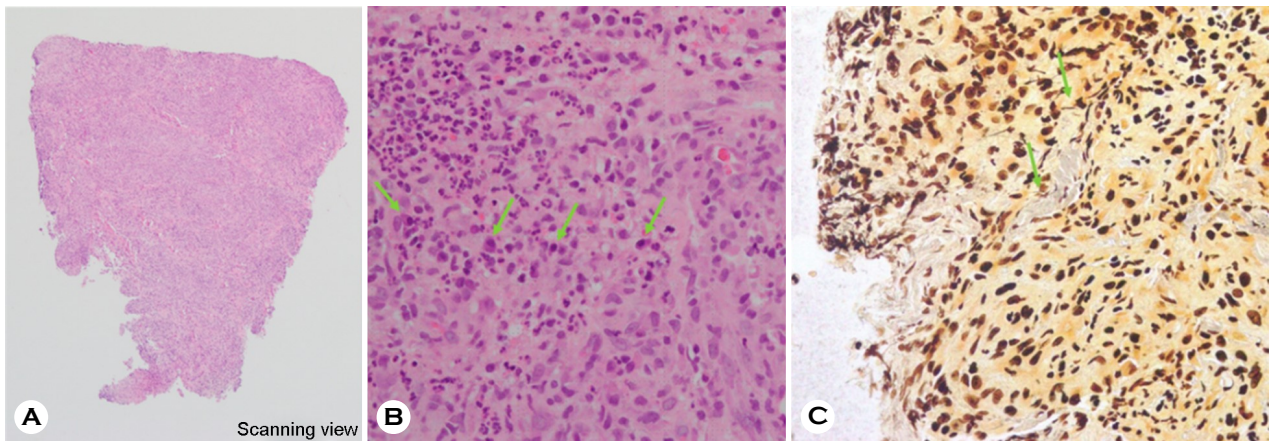


Fig. 2. (A, B) The section of a biopsy from the central ulcer demonstrated diffuse dermal inflammatory infiltration composed of lymphocytes, plasma cells, and neutrophils without normal epidermis (A: H&E, scanning view, B: H&E, x400). (C) There were scattered spirochete-like organisms in the dermis (Warthin-Starry stain, x400).

as extragenital chancres.

Our initial clinical suspicion was pyogenic granuloma, cutaneous tuberculosis, and pyoderma gangrenosum although histopathology led to the diagnosis of syphilis. To the best of our knowledge, there has been no report of extragenital primary syphilis resembling pyogenic granuloma. The findings suggest that a solitary ulcerated erythematous bump with moist surface on the suprapubic area can pose significant diagnostic challenges to clinicians. The possibility of chancre formation should be taken into account for such ulcerative nodules on the suprapubic area.

Key Words: Primary syphilis, Pyogenic granuloma, Warthin-Starry stain

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CONFLICT OF INTEREST

In relation to this article, we declare that there is no conflict of interest.

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PATIENT CONSENT STATEMENT

The patient provided written informed consent for the publication and the use of his images.

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