Case Letter

An Illustrative Case Report of Secondary Syphilis With Alopecia Syphilitica, Perianal Condyloma Latum, and Granuloma Annulare–Like Lesions

To the Editor:

Syphilis is reemerging, as evidenced by the increased incidence of primary and secondary syphilis cases.[1,2] When syphilis presents as unusual skin lesions, it often is misdiagnosed. The cutaneous features of secondary syphilis, known as syphilid, occur in 80% of patients, and more than 95% of the eruptions are macular, maculopapular, papular, or annular.[3] Nodular and pustular eruptions are infrequent. Although moth-eaten hair loss is the most typical sign, it is considered an uncommon manifestation of secondary syphilis.[4] The frequency of alopecia syphilitica reported in the literature ranges from 2.9% to 7.0%.[5] Another cutaneous feature of secondary syphilis is a mucous plaque, a macerated, flat, grayish, rounded erosion covered by a delicate soggy membrane.[6] We describe a patient with scalp alopecia, perianal condyloma latum, and annular scrotal lesions resembling granuloma annulare.

A 21-year-old man presented with increasing hair loss on the occipital scalp over 2 months and multiple patches on the perianal region. The patient indicated having a history of genital skin lesions. Physical examination revealed tiny patches of noncicatricial alopecia in the parieto-occipital scalp, giving a moth-eaten appearance (Figure 1). Several mucous plaques that were macerated, flat, flesh-colored, rounded erosions covered with malodorous mucoid exudate were seen on the perianal area (Figure 2). Multiple indurated, annular, erythematous, and verrucous plaques resembling granuloma annulare (2–3 cm in diameter) with raised borders were strikingly evident over the scrotal region (Figure 3).

A rapid plasma reagin (RPR) test was reactive at a titer of 1:64. The reactive RPR was obtained with the *Treponema pallidum* particle agglutination assay. Other laboratory analyses of blood and urine were normal, except downward-trending leukocytosis, mildly elevated hepatic transaminases, and a markedly elevated

Figure 1. Patches of irregular moth-eaten alopecia on the parieto-occipital scalp.

Figure 2. Flesh-colored, macerated, flat, mucous patches covered with mucoid exudate on the perianal area.

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Figure 3. Multiple indurated, annular, erythematous, and verrucous plaques resembling granuloma annulare over the scrotal region.

erythrocyte sedimentation rate of 100,000 mm/h (reference range, 0–20 mm/h). A screening test for human immunodeficiency virus was negative.

Based on these findings, we diagnosed the patient with secondary syphilis. He was treated with 2,400,000 U of penicillin G benzathine weekly (3 doses) that led to complete resolution of his alopecia. Flesh-colored mucous patches in the perianal area rapidly regressed within 2 weeks. Annular erythematous and verrucous lesions in the scrotum also were resolved. Three months later, a reassessment was conducted and the blood RPR titer had decreased to 1:4.

Syphilis, the great imitator, is caused by *T pallidum*. Its secondary phase typically begins 4 to 10 weeks after initial exposure.[7] The dermatologic findings of secondary syphilis are variable. Moth-eaten alopecia is one of the clinical manifestations of secondary syphilis. The alopecia may be subtle with diffuse areas of thinned hair but no overtly bald patches. These changes generally are temporary and resolve with treatment. Clinically, moth-eaten alopecia may be confused with trichotillomania, traction alopecia, and alopecia areata.[8]

Condyloma latum consists of extremely infectious moist papules seen in secondary syphilis. The surface may be smooth, papillated, or covered with cauliflower-like vegetations with grayish exudate. Condyloma latum is common on the anogenital regions, scrotum, medial aspect of the thighs, and retroauricular and inframammary folds. Constant moisture, friction, heat, and maceration at these sites facilitates coalescence and growth of syphilitic papules, resulting in development of plaquelike condylomas. Annular syphilid also is an uncommon presentation of secondary syphilis.[9] Annular lesions must be differentiated from erythema multiforme, superficial fungus infection, lichen planus, sarcoidosis, leprosy, tuberculosis, annular seborrheic dermatitis, gumma, granuloma annulare, and erythema gyratum.[9]

The World Health Organization guidelines recommend a single intramuscular injection of 2,400,000 U penicillin G benzathine for secondary syphilis.[10] However, in this report, the patient presented with alopecia syphilitica, perianal condyloma latum, and granuloma annulare–like lesions, which made the clinical presentation of secondary syphilis more complex. Thus we followed the recommendation of the Chinese Center for Disease Control and Prevention for sexually transmitted diseases treatment guidelines[11] and treated this patient with 3 weekly intramuscular injections of 2,400,000 U penicillin G benzathine.

Skin lesions including alopecia, mucous patches in the perianal area, and annular erythematous and verrucous lesions in the scrotum area disappeared with treatment. The blood RPR titer decreased to 1:4 at 3-month follow-up. Although there was a difference between the World Health Organization and Chinese Center for Disease Control and Prevention recommendations in the course of penicillin therapy for early syphilis, we believe that adequate extension of the penicillin G benzathine course allowed a constant concentration of the therapeutic agent and improved the cure rate.

Collectively, syphilis has variable manifestations, and even in the penicillin era, a high index of suspicion must be maintained. Dermatologists should be aware of these characteristics such as patchy hair loss. It is important when considering the etiology of puzzling cutaneous eruptions to include secondary syphilis in the differential diagnosis.[12]

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