Isolated genital annular lichen planus

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KEY WORDS

annular lichen planus, external genital organs, penis

ABSTRACT

Annular lichen planus is a rarely reported variant of lichen planus (LP). Although genital lesions are frequent in patients with LP, isolated genital LP is rarely reported. We present a case of a 29-year-old circumcised man with an asymptomatic annular lesion of the penis. Histopathological features were consistent with LP. Topical clobetasol was prescribed, with clinical improvement. It is important to consider annular LP among the possible diagnoses of individual annular genital lesions.

Case report

A 29-year-old circumcised man with no medical history was referred to dermatology because of an asymptomatic genital annular lesion of one month's duration. The patient was married and had not engaged in extramarital sex. He also denied any drug intake.

Cutaneous examination showed a reddish-purple scaly annular papular plaque of the glans penis and coronal sulcus (Fig. 1). There was no lesion anywhere else on the skin or mucous membranes.

Skin biopsy was performed on the edge of the plaque. Histopathological examination showed epidermal acanthosis with both hyperorthokeratosis and hypergranulosis. There was also a band-like lymphocytic infiltrate at the dermal-epidermal junction with hydropic degeneration of the basal layer, within which apoptotic bodies were seen (Fig. 2). Direct immunofluorescence was negative.

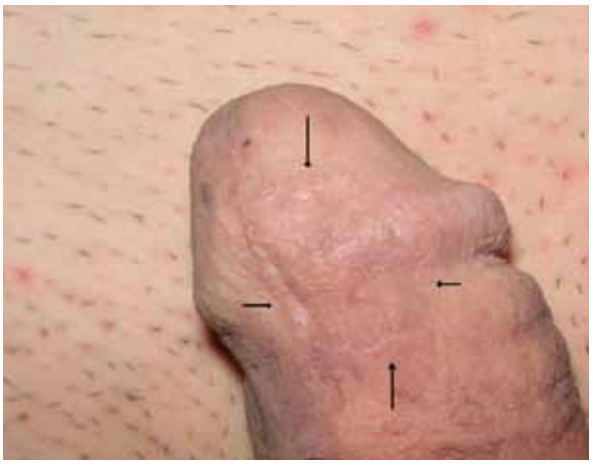

Figure 1. Reddish-purple scaly annular papular plaque of the penis.

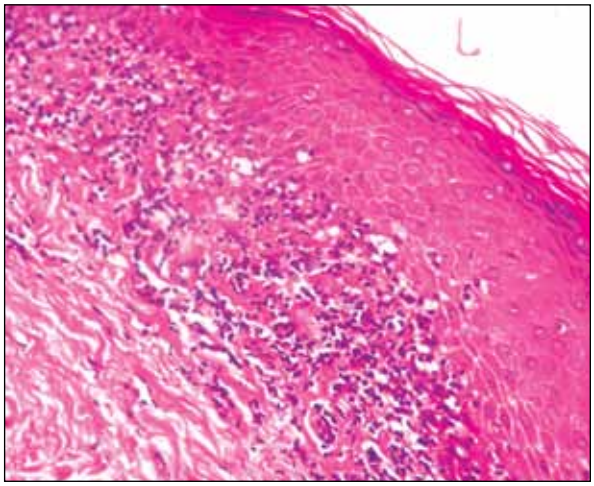

Figure 2. Acanthosis with hyperorthokeratosis and hypergranulosis associated with a band-like lymphocytic infiltrate at the dermal-epidermal junction with hydropic degeneration of the basal layer.

The final diagnosis was lichen planus in its annular variant. Serologies for hepatitis B and C, syphilis, and HIV were negative. Topical clobetasol was prescribed, which led to clinical improvement after 1 week of treatment.

Discussion

Lichen planus (LP) is a chronic, pruriginous inflammatory dermatosis, affecting skin, mucous membranes, scalp, and nails. It has polymorphous features (1). Annular lichen planus (ALP) is a well-defined variant of LP, although it is rarely reported. The mechanisms that lead to the formation of annular lesions are not clearly known. An immunohistochemical study showed that intercellular adhesion molecule 1 (ICAM-1) expression in the peripheral keratinocytes of active LP plaques may play an important role in the genesis of annular lesions (2).

The frequency of ALP is probably underestimated. Annular lesions are reported in only 3 to 7% of patients with LP (3, 4). Reich et al. (5) published 20 cases of ALP diagnosed over an 18-year period.

Genital lesions are present in about 25% of patients with LP (6) and are frequently annular (5). However, isolated genital LP as seen in our patient is rarely reported. In Reich's study of 18 male patients, a diagnosis of individual penile ALP was made in four cases (although biopsy was performed in only one of these). In another patient only the scrotum was involved (5).

Atrophic annular lichen planus is a rarely reported variant of ALP (7) that, to our knowledge, has never been noted on the genitalia.

Although classic LP is usually pruriginous, ALP such as that in our case is asymptomatic in most patients (5).

Differential diagnoses of genital ALP are granuloma annulare, porokeratosis, and syphilids (8). In ALP, histopathological examination shows typical features of LP. No particular pathological pattern has been associated with genital ALP.

Mid- to high-potency topical steroids are the first-line treatment in this form of genital LP. A satisfactory response is obtained in most patients (5).

Conclusion

Genital ALP should be considered among the potential diagnoses of individual annular genital lesions.

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