Our Dermatology Online

Case Letter

Ulcerative Zoon balanitis in an HIV-infected male

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Sir,

Zoon balanitis is a non-venereal disease characterized by a solitary, smooth, erythematous plaque on the glans penis [1]. Herein, we report the case of an unusual manifestation of Zoon balanitis in an HIV-infected male.

A 46-year-old, uncircumcised male on antiretroviral treatment presented with an exudative ulcer on the prepuce persistent for one month. During this time, he was diagnosed with fixed drug eruption and was treated with oral corticosteroids (0.6 to 0.8 mg/kg/day), yet the lesion remained unchanged. Then, the patient came to us with the clinical manifestation of a painless sore. He reported no personal history of sexual intercourse, trauma, or new drug intake in the previous four months. Clinical examination revealed a rounded, well-defined, exudative ulcer with a smooth pseudomembranous surface and a soft base on the prepuce (Fig. 1a). No inguinal lymphadenopathy was seen. Other systemic examinations were normal.

Laboratory evaluation showed that the rapid plasma reagin (RPR) and treponema pallidum hemagglutination (TPHA) tests were negative. CD4 count was 823 cells/mm^3, and the HIV (human immunodeficiency virus) load was 22 copies/mL. The bacterial culture was negative.

A biopsy of the ulcer revealed acanthosis, focal spongiosis of the epidermis, and focal ulceration. There was dense, sheet-like dermal infiltration with plasma cells (> 50%) and numerous capillaries, vascular ectasia, and extravasated erythrocytes (Figs. 2a-d).

Based on the clinical and histological findings, the diagnosis of Zoon balanitis was made (Figs. 2a – 2d).

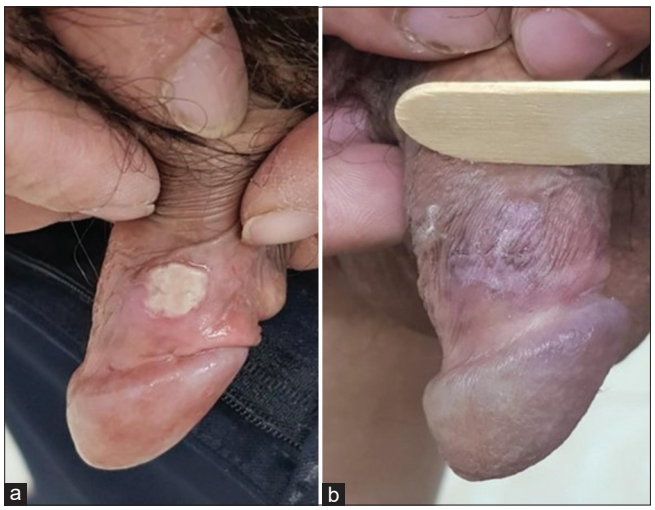

Figure 1: (a) A rounded, well-defined, exudative ulcer with a smooth pseudomembranous surface and a soft base on the prepuce. (b) After treatment.

The lesion improved in one month with a topical steroid (betamethasone valerate) combined with fusidic acid (Fig. 1b). Circumcision was recommended due to the recurrence.

Although Zoon balanitis was first reported by Zoon in 1952, its etiology remains unknown. It has been hypothesized that various triggers, such as uncircumcision, heat, poor hygiene, friction, trauma, hypospadias, and chronic infection with *Mycobacterium smegmatis* may contribute to the pathogenesis [2,3]. It typically presents as well-marginated, reddish-orange, shiny plaques on the glans or the prepuce. Other clinical variants of Zoon balanitis such as the erosive type and vegetative type have been reported in the literature [2]. However, to the best of our knowledge, the atypical manifestation of an exudative pseudomembranous ulcer in HIV-infected patients

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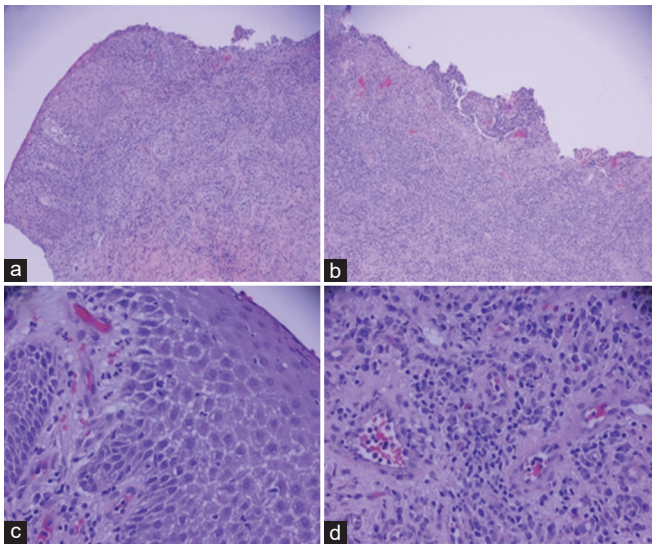

Figure 2: Histological findings. (a) Acanthosis with spongiosis and focal ulceration of the epidermis, dense inflammation of the superficial and deep dermis (H&E, 100×). (b) Vascular ectasia and deep inflammation in the dermis with an overlying ulcerated epidermis (H&E, 100×). (c) Spongiotic epidermis and edema of the papillary dermis with numerous extravasated erythrocytes (H&E, 400×). (d) Dense, sheet-like dermal infiltration of plasma cells (> 50%) with numerous capillaries (H&E, 400×).

with Zoon balanitis is rarely reported. This form is clinically difficult to distinguish from ulcers in syphilis, chancroid, erythroplasia of Queyrat, Behçet's disease, and erosive lichen planus. Therefore, in addition to microbiological and immunological tests, histopathology plays an important role in the diagnosis because of its characteristic images. As in our case, the skin biopsy revealed spongiotic and acanthotic epidermis, dense dermal infiltration with plasma cells, and vascular ectasia with extravasated erythrocytes, which was most suitable for the diagnosis of Zoon balanitis.

There are numerous options for the treatment of the disease, such as topical steroids, topical calcineurin inhibitors, 5% imiquimod, photodynamic therapy, carbon dioxide laser, Er: YAG laser, and circumcision [2].

Zoon balanitis, especially its ulcerative type, is underdiagnosed. We report this case to raise awareness to include Zoon balanitis as a differential diagnosis in patients with genital ulcers.

Consent

The examination of the patient was conducted according to the principles of the Declaration of Helsinki.

The authors certify that they have obtained all appropriate patient consent forms, in which the patients gave their consent for images and other clinical information to be included in the journal. The patients understand that their names and initials will not be published and due effort will be made to conceal their identity, but that anonymity cannot be guaranteed.

REFERENCES

1. Bari O, Cohen PR. Successful management of Zoon's balanitis with topical mupirocin ointment: A case report and literature review of mupirocin-responsive balanitis circumscripta plasmacelluaris. Dermatol Ther (Heidelb). 2017;7:203-10.
2. Dayal S, Sahu P. Zoon balanitis: A comprehensive review. Indian J Sex Transm Dis AIDS. 2016;37:129-38.
3. Daga SO, Wagaskar VG, Jumnake SF, Patwardhan SK. Zoon's balanitis treated with topical tacrolimus. Urol Ann. 2017;9:211-3.

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