

## RESIDENT ROUNDS: PART III

### Zoon's Balanitis

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#### ABSTRACT

Zoon's balanitis, is typically found in older, uncircumcised males and can be asymptomatic, pruritic, or cause dysuria. The typical appearance is erythematous, discrete, moist plaques with a "cayenne pepper" speckled appearance and an orange hue on the glans penis and sometimes prepuce, which may display "kissing lesions" on areas that are in direct contact with the lesions. These may eventually erode and leave a "rusty stain". Histologically, these have a dense lichenoid infiltrate in the upper and mid dermis with abundant plasma cells.

#### CASE REPORT

A 62-year-old Asian male with a history of rheumatoid arthritis presented to the clinic complaining of a red penile rash. It had been present for approximately 8 years and waxed in waned in terms of redness and area involved, but slowly enlarged to cover more area. He denied any symptoms associated with the rash including pain or tenderness, discharge, or bleeding. Previous treatments included an unknown topical steroid ointment, which only helped for a few months. He denied a history of any new medications in relation to this rash and had no new sexual contacts or high-risk behaviors.

On exam, on the glans of an uncircumcised penis there was a diffuse, deep red, and erythematous patch. On the distal shaft of the penis was a similar appearing patch sparing the coronal sulcus with a "cayenne pepper" red/orange, speckled periphery. A deep shave biopsy showed a superficially attenuated mucosal surface with a dense inflammatory infiltrate in the dermis composed predominantly of plasma cells mixed with lymphomononuclear cells. Microorganism stains were negative.

#### DISCUSSION

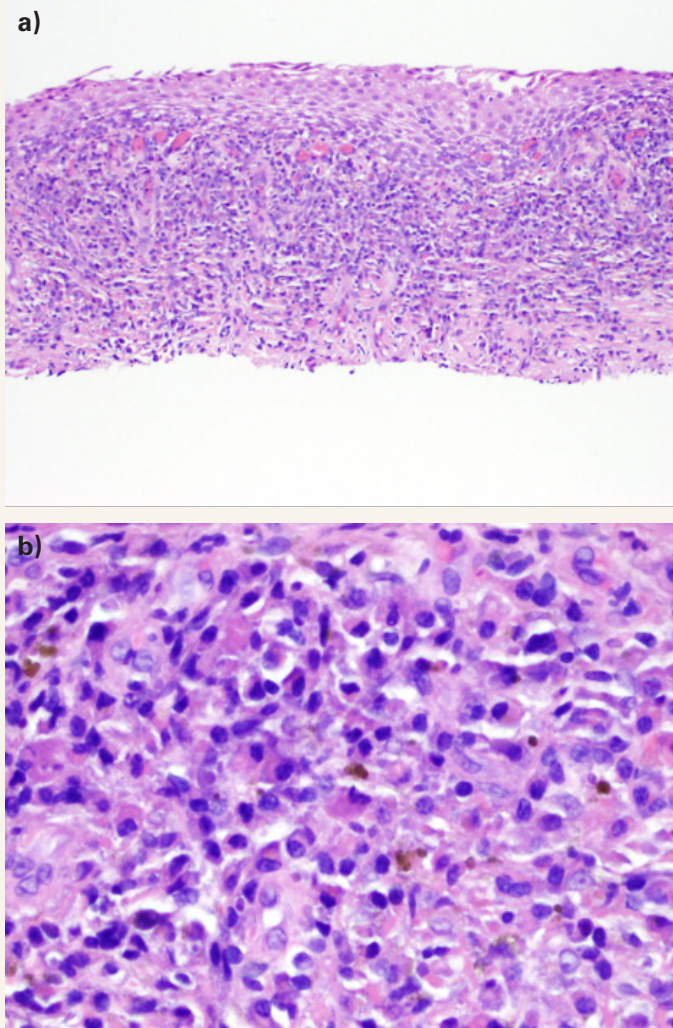
Zoon's balanitis is typically found in older, uncircumcised males and can be asymptomatic, pruritic, or cause dysuria. The typical appearance are erythematous, discrete, moist plaques with a "cayenne pepper" speckled appearance and an orange hue on the glans penis, and sometimes prepuce, which may display "kissing lesions" on areas that is in direct contact with the lesions. These may eventually erode and leave a "rusty stain".<sup>1</sup> Histologically, these have a dense lichenoid infiltrate in the upper and mid dermis with abundant plasma cells.

The traditional teaching of Zoon's balanitis is that it is generally a benign, chronic, inflammatory process in uncircumcised males, which is best treated by circumcision. There is a case report of this condition occurring in a circumcised male<sup>2</sup> and there are many reports of it being treated medically rather than surgically. Zoon's balanitis is reported to have been treated successfully

**FIGURE 1.** Erythematous patch on the glans and distal shaft of the penis with a cayenne pepper periphery.



**FIGURE 2.** Dense inflammatory infiltrate **a)** with a predominance of plasma cells on high power **b).**



with topical tacrolimus, pimecrolimus,<sup>3</sup> and imiquimod,<sup>4</sup> as well as surgical treatment with either CO<sub>2</sub><sup>5</sup> or ablative erbium:YAG<sup>6</sup> lasers, although in some cases the disease recurred (CO<sub>2</sub> laser) or was not cleared histologically (imiquimod). Furthermore, Zoon's balanitis has also been reported to precede squamous cell carcinoma<sup>7</sup> and squamous cell carcinoma in situ.<sup>8</sup> Given this information, it may be appropriate to consider either medical treatment of this condition or minimally invasive surgical procedures such as lasers before surgical circumcision. Furthermore, consideration should be taken to follow these patients for development of malignancy.

## DISCLOSURES

None of the authors have declared any relevant conflicts.

## REFERENCES

1. Bologna JL, Jorizzo JL, Schaffer JV, et al. *Dermatology*, 3rd ed. Spain: Elsevier, 2012.
2. Toker SC, Baskan EB, Tunali S, et al. Zoon's balanitis in a circumcised man. *J Am Acad Dermatol*. 2007; 57(2 Suppl):S6-7.

3. Delgado L, Brandt HR, Ortolan DG, et al. Zoon's plasma cell balanitis: a report of two cases treated with pimecrolimus. *An Bras Dermatol*. 2011; 86(4 Suppl 1):S35-8.
4. Marconi B, Campanati A, Simonetti O, et al. Zoon's balanitis treated with imiquimod 5% cream. *Eur J Dermatol*. 2010; 20(1):134-5.
5. Retamar RA, Kien MC, Chouela EN. Zoon's balanitis: presentation of 15 patients, five treated with a carbon dioxide laser. *Int J Dermatol*. 2003; 42(4):305-7.
6. Wollina U. Ablative erbium:YAG laser treatment of idiopathic chronic inflammatory non-cicatricial balanoposthitis (Zoon's disease)—a series of 20 patients with long-term outcome. *J Cosmet Laser Ther*. 2010; 12(3):120-3.
7. Balato N, Scalvenzi M, La Bella S, et al. Zoon's Balanitis: Benign or Premalignant Lesion? *Case Rep Dermatol*. 2009; 1(1):7-10.
8. Starritt E, Lee S. Erythroplasia of Queyrat of the glans penis on a background of Zoon's plasma cell balanitis. *Australas J Dermatol*. 2008; 49(2):103-5.

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