

## Case Report

# Glans redness in a 66-year-old gentleman

## 66歲男子龜頭發紅

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A 66-year-old Chinese male presented with redness over the glans penis for 3 months. Penile swab was unremarkable. Clinical and histopathological findings suggested the diagnosis of Zoon's balanitis.

66歲中國男子呈陰莖龜頭發紅達三個月，陰莖拭子細菌培養無異常。臨床及病理學發現提示Zoon氏龜頭炎的診斷。

**Keywords:** Zoon's balanitis

**關鍵詞：** Zoon 氏龜頭炎

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## Introduction

Zoon's balanitis is a chronic, benign, inflammatory process usually involving the glans penis, and occasionally, the prepuce. It is rare but probably under-recognised. The aetiology remains unknown. The clinical picture is characterised by

a sharply demarcated, shiny, erythematous or red-brown, asymptomatic plaque.

## Case report

A 66-year-old Chinese male was first seen in October 2006 because of on and off redness on the glans penis for 3 months. It was not itchy or painful. All along there was no vesicle or ulceration. He was otherwise well with no dysuria or urethral discharge. The patient was known to have diabetes mellitus and hypertension and was on regular medications. There was no change of medication prior to the onset of eruption. He did not have any history of sexually transmitted disease. His last venereal exposure with a female commercial sex worker was already 16 years ago.

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Physical examination showed shiny well-defined smooth reddish plaques on the glans and inner surface of the prepuce measuring around 2 cm in diameter (Figure 1). There was no ulceration or vesicle. The clinical differential diagnoses included infective balanitis like candidal balanitis, irritant contact dermatitis, fixed drug eruption, Zoon's balanitis and erythroplasia of Queyrat.

A penile swab was performed and the result was negative. Serological tests for syphilis and HIV were negative. A skin biopsy was done which showed flattened epidermis with diamond shaped keratinocytes separated by intercellular oedema. There was focal subepidermal cleavage, band-like lympho-plasmacytic infiltrate and prominent capillaries. No epidermal dysplasia was seen (Figures 2 & 3). The features were consistent with balanitis circumscripta plasmacellularis. One percent hydrocortisone + 3% vioform cream was prescribed to the patient. The condition of the patient gradually improved.

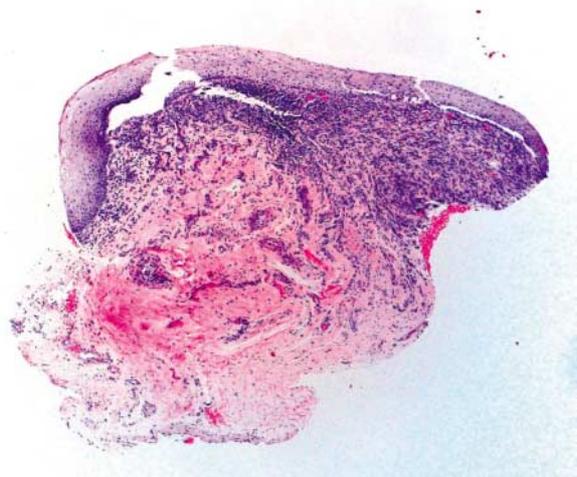
## Discussion

In 1952, Zoon<sup>1</sup> described eight cases of chronic balanitis, clinically resembling erythroplasia of Queyrat, characterised by a distinctive

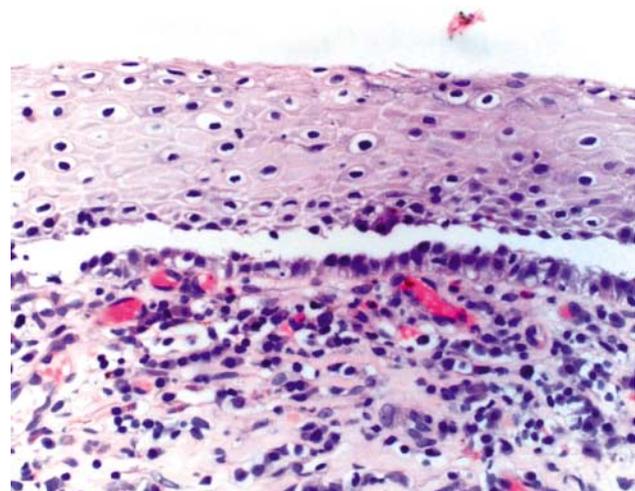


**Figure 1.** Shiny well defined smooth reddish plaques on the glans and inner surface of the prepuce.

inflammatory infiltrate of plasma cells with no signs of malignancy in the surface epithelium. He named the condition "balanoposthitis chronica circumscripta benigna plasmacellularis". It has been referred to as plasma cell balanitis or Zoon's balanitis thereafter.



**Figure 2.** Flattened epidermis with band-like inflammation in the upper dermis. (H&E, original magnification x 5)



**Figure 3.** Flattened epidermis containing diamond shaped keratinocytes separated by mild intercellular oedema. There is no dysplasia. The capillaries are prominent. There is a band-like infiltrate with predominance of plasma cells. (H&E, original magnification x 40)

Zoon's balanitis is a relatively rare and benign inflammatory condition affecting uncircumcised men. The aetiology remains unknown. Weyers et al suggested that Zoon's balanitis was a non-specific inflammatory reactive pattern that might occur as an isolated finding or may complicate other skin diseases, such as lichen planus, contact dermatitis, and psoriasis of the glans penis or prepuce in uncircumcised aged men. It may be caused by irritation or mild trauma affecting keratinized skin in a moist environment.<sup>2</sup>

It presents clinically as a sharply demarcated, shiny, erythematous or red-brown, asymptomatic plaque affecting the glans penis and prepuce. Other areas such as the female genitalia<sup>3</sup> and oral mucosa.<sup>4</sup> can be affected by a similar condition.

The histopathologic examination in Zoon's balanitis is characterised by a thinned epidermis, and sometimes total disappearance of the outer layers. A band of dermal infiltration with plasma cells of a variable density can be seen. Capillaries are dilated, and extravasated red blood cells and haemosiderin deposits may be found. An immunohistochemical study of plasmocytes in Zoon's balanitis has shown that these plasmocytes produce predominantly immunoglobulin G (IgG), and IgA and IgM to a lesser degree.

Different treatments have been tried. Few cases have been reported on the use of topical corticosteroids,<sup>5</sup> fusidic acid,<sup>6</sup> topical tacrolimus<sup>7</sup>

and laser.<sup>8,9</sup> The gold standard for management of Zoon's balanitis is still circumcision.<sup>3</sup> The largest series by Kumar et al<sup>10</sup> showed 27 patients with Zoon's balanitis successfully treated by circumcision with no recurrence on long-term follow-up.

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