Bowen's disease: An unusual clinical presentation

Sir,

Bowen's disease is an intra-epidermal squamous cell carcinoma that is carcinoma *in situ*. It usually affects the fair skinned individuals with a peak incidence in sixth to eighth decade of life. Most common sites are the head and neck followed by the extremities. The etiological causes known are chronic ultraviolet radiation exposure, human papillomavirus infection, arsenic exposure, previous radiation, immunosuppression, trauma and genetic factors.[1] The risk of development of invasive carcinoma is 3-5% in extra-genital lesions and 10% in genital lesions.[2]

A 57-year-old man presented with a painless raised lesion over the shaft of penis since five years, which was gradually increasing in size. There was no history of prior raw areas or trauma at the site of lesion, topical application or unsafe sexual exposure. Systemic symptoms such as fever, malaise,

or weight loss were absent. There was no history of any other major medical or surgical illness.

On clinical examination, a single painless, minimally scaly, slightly erythematous plaque with a hyperpigmented border of size 2 cm × 0.5 cm was seen on the dorsolateral aspect of the shaft of the penis [Figure 1]. No regional lymphadenopathy was noted and no similar lesion was present elsewhere on the body. Enzyme-linked immunosorbent assay for human immunodeficiency virus and Venereal Disease Research Laboratory Test were negative/non-reactive.

A differential diagnosis of discoid lupus erythematosus, lichen sclerosus et atrophicus and extramammary Paget's (EPD) disease was considered. A biopsy was drawn from the lesion. On histopathological examination, the epidermis showed acanthosis, and elongation and thickening of the rete ridges with crowding of keratinocytes. Throughout the epidermis, the cells were in complete disarray, reflecting a "wind-blown" appearance [Figure 2]. Anisocytosis, loss of polarity and few mitotic figures were seen. The dyskeratotic cells were large, round and had homogeneous, strongly eosinophilic cytoplasm with hyperchromatic nuclei. Basal cell layer and basement membrane were intact [Figure 3]. Dermis showed an inflammatory infiltrate of lymphocytes [Figure 3]. These findings were consistent with Bowen's disease. Surgical excision with a wide margin was done and patient was followed-up for one year with no recurrence til date.

The usual clinical presentation of Bowen's disease is a single erythematous, infiltrated, scaly, crusted, fissured plaque that may be commonly confused with psoriasis, nummular eczema and actinic keratosis. Sometimes, the lesion can be pigmented and have a variable presentation. Bowen's disease presenting as a slightly erythematous plaque, as in our case, mimicking discoid lupus erythematosus and Lichen sclerosus et atrophicus is rare. As per our knowledge there is only one such case report in the literature.[3] Hence, histopathological examination should be done in all doubtful lesions on the penis to rule out carcinoma *in situ*. It is difficult to distinguish between Pagetoid variant of Bowen's disease and EPD. The differentiating histopathological features are involvement of whole thickness of the epidermis in Bowen's disease in contrast to lower layers in Paget's disease. Flattening of the basal layer by nests of cells, Pagetoid cells within the stratum corneum and acinar structures within epidermis are present in Paget's disease while intercellular bridges are visible between cells in Bowen's disease.[4]

Immunohistochemistry stains help in distinguishing the two diseases. The neoplastic cells in pagetoid variant of Bowen's disease are negative for cytokeratin 7, carcinoembryonic antigen and gross cystic disease fluid protein 15, whereas the neoplastic cells (Paget's cells) in EPD are positive for them.[5] In a dermoscopic study of Bowen's disease, the characteristic dermoscopic features found were glomerular vessels (90.5%) and a scaly surface (90.5%).[6]

Various treatment modalities used are topical imiquimod cream, topical 5-fluorouracil cream, cryotherapy, surgical excision, curettage and electrocautery and photodynamic therapy (PDT), lasers and topical diclofenac.[7] PDT has been shown to be an effective treatment option for Bowen's disease with 80-95% complete response rates and an excellent cosmetic outcome especially for large lesions.[8]

Figure 1: Single painless minimally scaly hypo pigmented plaque with a hyper pigmented border of 2 cm × 0.5 cm was seen on the dorsolateral aspect of the shaft of penis

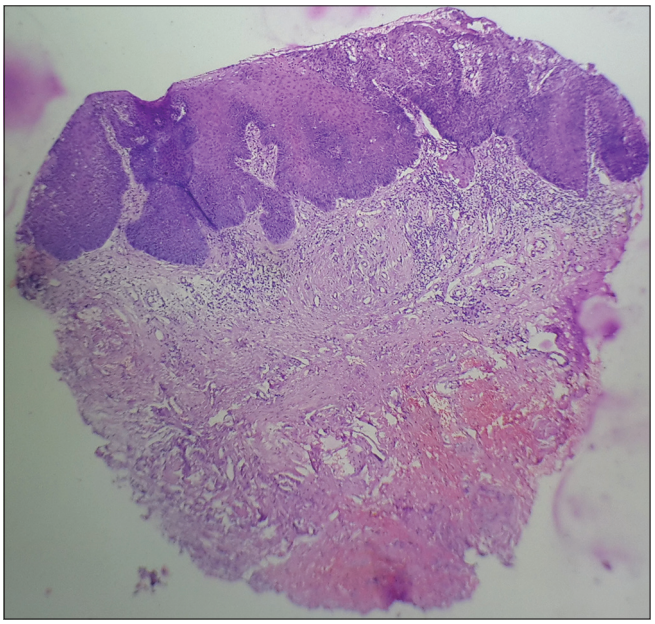

Figure 2: Epidermis shows acanthosis with elongation and thickening of the rete ridges with crowding of keratinocyte. Throughout the epidermis, the cells lie in complete disorder, resulting in a "wind-blown" appearance (H and E, ×40)

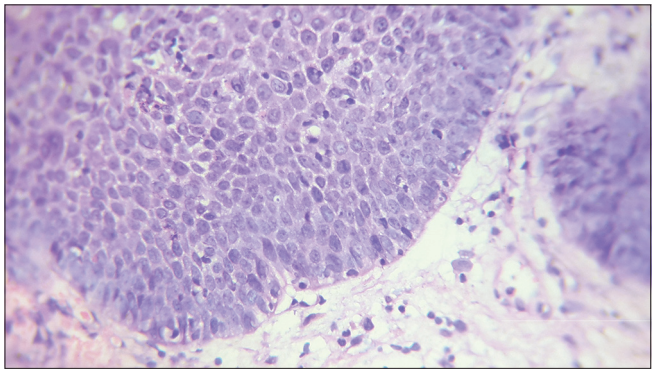

Figure 3: Basement membrane was intact. Anisocytosis, loss of polarity and few mitotic figures were seen. The dyskeratotic cells were large, round and had a homogeneous, strongly eosinophilic cytoplasm and a hyperchromatic nucleus (H and E, ×400)

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