A crusty crimson plaque

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With sufficient training and expertise, clinicians can use dermoscopy to improve diagnostic accuracy for melanocytic lesions and other common skin tumours.

Case presentation

A 66-year-old woman presented with an asymptomatic red scaly patch on her leg that had been slowly enlarging over a two-year period. She was a renal transplant recipient and had a history of treatment for multiple nonmelanoma skin cancers affecting both legs.

On examination, a well demarcated but irregularly-shaped scaly red plaque (9 mm diameter) was observed on the anterior aspect of the right shin (Figure 1). Areas of superficial ulceration were present.

Dermoscopy revealed subtle hyperkeratosis, multiple glomerular vessels and multifocal hypopigmentation (Figure 2). The absence of a discernible pigment network was significant.

Diagnosis

A punch biopsy confirmed the clinical suspicion of Bowen's disease.

Discussion

Bowen's disease represents squamous cell carcinoma *in situ*. It predominantly affects the skin of older and fair skinned individuals with chronic solar damage. Inorganic arsenic ingestion, human papilloma virus infection, immunosuppression and exposure to ionising radiation have also been implicated as aetiological factors.

Bowen's disease typically presents as a solitary and slowly expanding bright red or pink scaly plaque on sun exposed sites such as the lower legs, but it may arise at any site. The risk of progression to invasive squamous cell carcinoma is in the order of 5%, and this is heralded by the growth of a supervening nodule. The major differential diagnoses include actinic keratoses, superficial basal cell carcinoma, amelanotic melanoma and inflammatory dermatoses such as psoriasis, eczema or lichen planus. Histologically, full thickness epidermal dysplasia is seen in Bowen's disease. Hyperkeratosis or parakeratosis is sometimes seen.

Dermoscopically, convoluted vessels mimicking the glomerular apparatus of the kidney are frequently observed in Bowen's disease. These glomerular vessels are typically clustered together in a regular formation and incompletely throughout the plaque, in association with red globules and hyperkeratosis. In pigmented Bowen's disease, grey through brown homogeneous

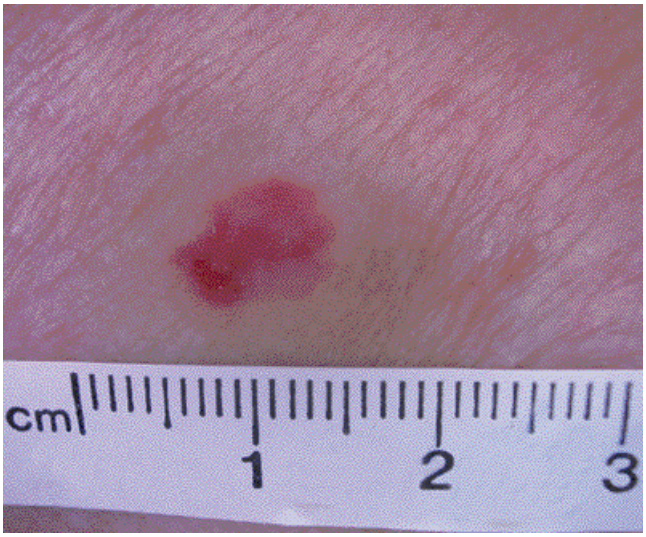

Figure 1. The well demarcated red scaly plaque that had been slowly expanding over a two-year period.

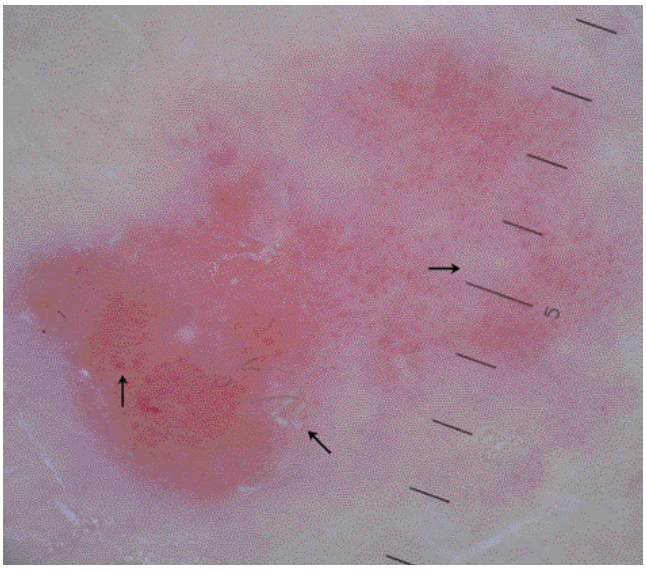

Figure 2. Dermoscopy of the lesion in Figure 1. From left, the arrows show glomerular vessels, hyperkeratosis and multifocal hypopigmentation (scale in millimetres).

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pigmentation or brown globules may be observed. This appearance is distinct from psoriasis, where dotted vessels are seen diffusely throughout lesional skin, and from superficial basal cell carcinoma, which typically shows microarborising vessels on a milky-pink background. To date, there are no studies to accurately assess the true sensitivity and specificity of glomerular vessels in Bowen's disease – in my experience, they may also be seen in large actinic keratoses and it has been reported that they may occur in severe venous stasis. The histopathological correlate of glomerular vessels are the grouped and dilated capillaries in the dermal papillae beneath Bowen's disease.

Treatment options for Bowen's disease are serial light cryotherapy, topical fluorouracil (Efudix) or imiquimod (Aldara), curettage and diathermy, surgical excision and photodynamic therapy.

Keypoint

Dermoscopy can be a valuable adjunctive tool for increasing diagnostic accuracy for the common clinical dilemma of a solitary red scaly plaque. In Bowen's disease, the most specific dermoscopic feature is the combined presence of glomerular vessels and hyperkeratosis. MT

Further reading

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2. Zalaudek I, Argenziano G, Leinweber B, et al. Dermoscopy of Bowen's disease. Br J Dermatol 2004; 150: 1112-1116.
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DECLARATION OF INTEREST: None.