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Nodular malignant melanoma. Or maybe not?

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Clinical findings

A 84-year-old white woman presented with a 6-month history of an ulcerated tumour on her left shoulder. The lesion was 20 × 15 mm in size, had a heavily pigmented plaque-like peripheral component with well-defined borders (Fig. 1), and was asymptomatic. There were no systemic abnormalities or any palpable lymphadenopathy.

Histopathological findings

On histopathological examination, there was a well-circumscribed epithelial proliferation of monomorphic cuboidal cells, with focal evidence of ductal differentiation (Fig. 2). In the lateral intraepidermal component, the proliferation was composed of similar cells with heavily pigmented cytoplasm, forming nests that were fairly well-demarcated from the adjacent keratinocytes (Fig. 3). Rare mitoses were seen, but there were no atypical mitotic figures or cytological atypia.

What is your diagnosis?

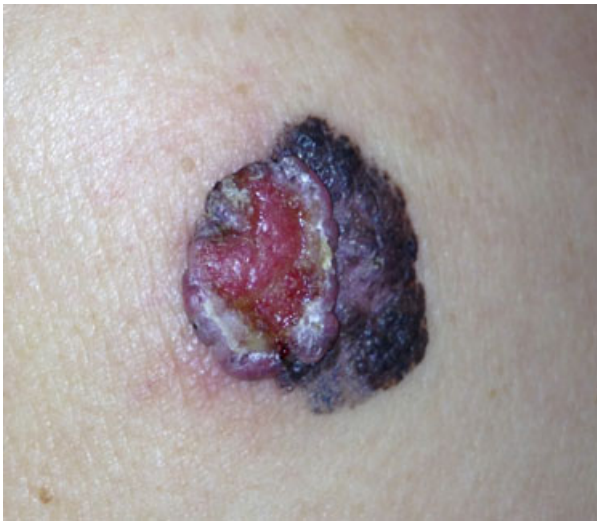

Figure 1 Ulcerated tumour 20 × 15 mm in size, overlying a well-defined, heavily pigmented plaque on the left shoulder.

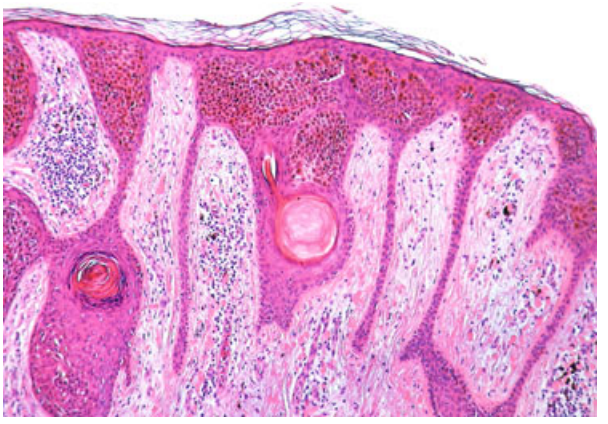

Figure 2 Borst–Jadassohn phenomenon in the lateral intraepidermal component (haematoxylin and eosin, original magnification × 400).

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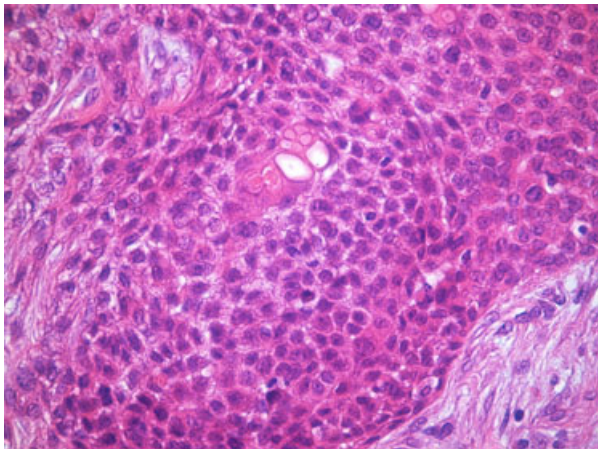

Figure 3 Well-circumscribed epithelial proliferation of monomorphic cuboidal cells with focal evidence of ductal differentiation (haematoxylin and eosin, original magnification × 400).

Diagnosis

Pigmented eccrine poroma (EP).

Discussion

EP is a benign adnexal tumour with variable clinical presentation, which can mimic a number of other cutaneous tumours, not all of them benign. The term 'poroma' derives from the poroid or distal ductal differentiation, and it can be of eccrine or apocrine lineage. There are several histopathological variants of poroma (hidroacanthoma simplex, classic poroma, dermal duct tumour and apocrine poroma), which have distinct clinical features.[1] The classic form affects mainly adults, and occurs on acral sites (65% on the feet, 10% on the hands) the face and scalp, and less commonly, the neck and trunk.[1] The pigmented form of EP is uncommon, and is usually located in nonacral sites in nonwhite patients.[2,3] Our case report stands out by its unusual nonacral location in a white woman and, most importantly, by its striking clinical presentation, mimicking malignant melanoma (MM).

The diagnosis of EP is essentially histopathological: cuboidal epithelial cells associated with ductal differentiation and a sharp demarcation from the adjacent epidermis are seen. The pigmented form is characterized by the presence of melanin in the tumour cells and colonization by dendritic melanocytes. Pigmentation of EPs may result from: (i) activation of persistent melanocytes in the eccrine acrosyringium, possibly reflecting regression to a more primitive phenotype; or (ii) the migration and proliferation of epidermal melanocytes from the adjacent epidermis, under the influence of upregulated tumour-derived melanocyte-stimulating factors, such as endothelin-1.[3]

Reports suggest that dermatoscopy may help in the differentiating between pigmented EP and pigmented basal cell carcinoma. The two tumours may share some features, including the absence of a pigment network, presence of branched streaks or aggregated pigment globules in ovoid nests, blue-grey dots and arborizing telangiectasia, but maple leaf-like structures and spoke-wheel areas are absent in pigmented EP.[4]

Treatment of EP consists of surgical excision. There are reports of recurrence of the lesion or even malignant progression (eccrine porocarcinoma), so appropriate follow-up is advisable. We treated our patient with surgical excision of the tumour, which was complete, and the healing process progressed uneventfully. At the 6-month follow-up, there was no recurrence of the lesion.

In conclusion, although it is rare, pigmented EP should be considered in the differential diagnosis of MM, a distinction that has important therapeutic and prognostic implications.

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