

## QUIZ SECTION

### A Red-violaceous Papular Lesion in a Young Girl: A Quiz

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A 19-year-old girl presented with a 5-month history of an asymptomatic lesion on her right forearm. Physical examination showed a red-violaceous, papular lesion of 10×5 mm in size, surrounded by a yellowish area that gradually expanded peripherally (Fig. 1). The patient denied an history of previous trauma to the area. Dermoscopy revealed the

presence of red roundish lagoon-like areas in the centre of the lesion and of a thin pigment network at the periphery (Fig. 2A). Surgical excision of the lesion and histological examination (Fig. 2B) were performed.

*What is your diagnosis? See next page for answer.*



Fig. 1. Red-violaceous, papular lesion of 10×5 mm in size, surrounded by a yellowish area.

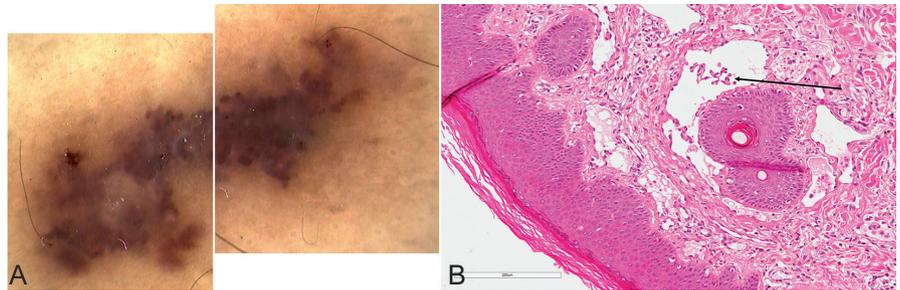


Fig. 2. Dermoscopy: red roundish lagoon-like areas in the centre of the lesion with a fine pigment network at the periphery (A). Histopathology: vascular proliferation in the superficial and mid dermis characterised by endothelial cells with hobnail appearance (*arrow*); a scattered haemosiderin deposition is present (B).

## ANSWERS TO QUIZ

**A Red-violaceous Papular Lesion in a Young Girl: A Comment**

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**Diagnosis: Targetoid hemosiderotic haemangioma**

Targetoid hemosiderotic haemangioma (THH), also known as hobnail haemangioma, first described by Santa Cruz & Aronberg in 1988 (1), is an unusual, benign vascular proliferation that arises most commonly on the trunk and limbs of young or middle-aged adults (2).

The pathogenesis of THH is still unknown. It has been suggested that THH may result from trauma of a pre-existing haemangioma (3, 4). Influences of sex steroid hormones have been proposed but immunohistochemical staining failed to demonstrate either oestrogen or progesterone receptors (5). A lymphatic origin has also been hypothesised and supported by lymphatic endothelial cell marker D2-40 positivity and general lack of CD34 staining (6, 7).

Clinically, THH appears as a solitary, red, purple, and/or brown papule or macule with a peripheral brown or ecchymotic ring, giving a targetoid appearance that can expand or subsequently disappear (8, 9). However, the classic halo may not be present (10).

Histologically, THH is mainly characterised by dermal vascular proliferation. In the superficial and mid-dermis, a single layer of endothelial cells (positive for CD31), with hobnail appearance (scanty cytoplasm and rounded nuclei protruding into the lumen), lines the ectatic and dilated vascular lumens; in the deeper dermis, the vascular spaces are narrower and angulated and often appear to dissect through collagen bundles. Moreover, a scattered hemosiderin deposition may be seen in the dermis (7, 8, 10, 11).

Upon dermoscopy analysis, THH is characterised by the presence of red round to oval structures (lagoon-like areas) in the centre of the lesion that correspond to the ectatic thin walled-vessels in the papillary dermis and of a peripheral pigment network corresponding to the deposition of hemosiderin (2, 8, 12, 13).

In uncomplicated cases, the diagnosis of THH is clinical. However, when clinical presentation is not typical, dermoscopy may aid in the differential diagnosis with other similar lesions, such as melanocytic naevi, melanoma,

dermatofibroma, Kaposi's sarcoma, haemangioma, insect bite reaction and fibrous histiocytoma, which however show different dermoscopic features.

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