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characteristic findings of streaks observed in the present case could be due to large melanin deposits in the slanting cornified layer, because the lesion of present patient was located in the area receiving the pressure of bodyweight. Based on our observation, PSN on glabrous skin might show different dermoscopic patterns from both benign melanocytic nevi and melanoma *in situ*, and might show different findings according to location.

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## Dermoscopic diagnosis of a rare, congenital vascular tumor: Verrucous hemangioma

Dear Editor,

Verrucous hemangioma (VH) is a rare, congenital vascular tumor, initially appearing as a reddish macular area of the vascular staining resembling "port-wine" stain. After a variable number of years and recurrent episodes of bleeding and infection, it begins to take on its characteristic bluish-black color and an increasingly verrucous surface becoming bluish-black, verrucous and hyperkeratotic plaques, nodules or bands.

(a) (b)

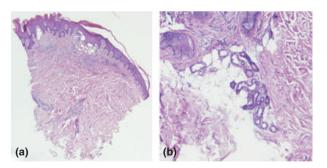
**Figure 1.** (a) Dark, bluish-black hard nodule with rough surface (Sony DSC T 700 digital photo-camera). (b) Alveolar appearance, dominance of dark-bluish pigmentation and dark round lacunae, at the periphery of lesion (Dermlite photo 37, 3GEN mounted on the Nikon Coolpix 4500 digital photo-camera). (c) Alveolar appearance (close-up view).

In this report, the dermoscopic finding of VH in a female child are described and it is an exclusive report of its dermoscopic features.

A 14-year-old, Caucasian girl was referred to the Dermatology Clinic of the Clinical Center of Serbia, Belgrade, Serbia, for the evaluation of a congenital, pigmented lesion on her right leg. Trauma of the lesion caused the patient to seek medical advice for the first time at this stage of the lesion.

Clinical examination (Fig. 1a) revealed a solitary, well-circumscribed, dark bluish-black nodule of 1.2 cm in diameter. On palpation, the lesion was hard and with a rough surface. It was not compressible and did not blanch under pressure. Full physical examination showed no other abnormality.

The major dermoscopic feature (Fig. 1b), of almost the entire lesion, was the alveolar appearance (Fig. 1c), numerous small,



**Figure 2.** (a) Histopathology showing the hyperkeratosis, irregular acanthosis and numerous, heavily dilated papillary vessels in the underlying dermis as well as numerous dilated capillary-type vessels in the reticular dermis and hypodermis. (b) Numerous and dilated vessels in adipose tissue (close-up view). (Hematoxylin-eosin, original magnification ×100.)

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oval and polygonal elements surrounded by slightly darker pigmentation and mildly presenting sulci. The dominance of blue color was another striking feature with different shadows of light blue, indigo blue and dark bluish-black, developing in one part of the lesion, and a blue-white veil. The clue for it being a vascular lesion, sharply demarcated, dark lacunae, was seen only at the periphery, surrounding the lesion.

Histologically (Fig. 2a), the lesion was characterized by a hyperplastic epidermis showing hyperkeratosis and irregular acanthosis. The underlying dermis was occupied by numerous, dilated vessels, some located between lengthened dermal papillae. Numerous, smaller vessels, mainly of capillary type, were extending below them in the reticular dermis and hypodermis (Fig. 2b).

Verrucous hemangioma in its pre-verrucous state may be indistinguishable from infantile hemangioma, venous and/or lymphatic malformation and angiokeratoma. The presented lesion was brought to medical attention in its mature phase when clinical and dermoscopic differential diagnoses include pigmented lesions, including melanoma. Characteristic dermoscopic feature in this stage of lesion is alveolar appearance, due to reactive epidermal hyperplasia. This feature is well described by Orpin et al.1 as a new variant of fissures seen in seborrheic keratosis (SK) beside the ones that produces a network-like pattern and a cerebriform pattern (brain-like appearance). An increasingly verrucous surface lead to central disappearance of lacunae and over the time they remain only at the periphery of the lesion. These two features, alveolar appearance and lacunae, are in contrast to specific dermoscopic features which can be seen in pigmented lesions.

On dermoscopy, we can see some resemblance to malignant melanoma (presence of blue-white veil), pigmented basal cell carcinoma (blurred lacunae that may look like blue-grey ovoid nests) and seborrheic keratosis (alveolar appearance). However, complete absence of a pigment network, as highly specific dermoscopic criteria for melanocytic lesions, and the lack of other melanoma-specific criteria as well as the absence of classic features of pigmented basal cell carcinoma (e.g.

leaf-like and spoke-wheel pigmentation, arborizing vessels, erosions) and seborrheic keratosis (e.g. milia, comedo-like openings) with distinction of lacunae may help us to make the accurate diagnosis of VH and choose an appropriate treatment.

Histologically, VH initially appears as capillary hemangioma concentrated in the dermis and hypodermis. Over time, an intense proliferative reaction of the epidermis is developed, assuming the verruciform pattern with hyperkeratosis, papillomatosis, irregular acanthosis and underlying capillary, cavernous or mixed hemangioma.<sup>2</sup> The histological appearance closely resembles angiokeratoma, but in VH the vascular spaces affect the lower dermis and subcutaneous tissues.

Clinical findings alone or an inadequate (superficial) specimen can be misleading. Accurate diagnosis is extremely important when planning therapy, because incomplete excision of VH leads to persistence and continued enlargement of the lesion. Because of deeper vascular infiltration, the recurrence rate of VH is 33%, especially when the lesions are larger than 2 cm in diameter.<sup>3</sup> Currently, no specific immunohistochemical marker exists to diagnose VH. Deep surgical excision, performed as early as possible before the verrucous lesion begins to expand, is the treatment of choice for VH.

This report, shows that VH has distinct, differential dermoscopic features and suggests that dermoscopy may contribute in diagnosis of this rare, congenital vascular tumor.

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## **Dermoscopy of lichen aureus**

Dear Editor,

Lichen aureus is a variant of pigmented purpuric dermatoses, which is characterized clinically by purpura with golden patches.<sup>1</sup> Zaballos *et al.*<sup>2</sup> reported that lichen aureus showed four characteristic dermoscopic features: (i) brownish or coppery-red diffuse coloration of the background; (ii) round to oval red dots, globules and patches; (iii) some gray dots; and (iv) a

network of brownish to gray interconnected lines. No other reports have been published concerning the dermoscopic findings of lichen aureus. Here, we present three Japanese cases of lichen aureus, and evaluate the dermoscopic findings.

Clinical presentations and dermoscopic images of three cases are shown in Figure 1(a-f), and are summarized in Table 1. Biopsy specimens revealed the infiltration of

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