

Dermoscopic Features of Schwannoma

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Introduction

Schwannomas present as ill-defined soft tissue masses that are painful in one-third of cases [1]. Clinical diagnosis based on morphologic patterns alone is often difficult. It requires differentiation from other dermal or subcutaneous tumors, including neurofibroma, intradermal nevus, epidermal cyst, lipoma, and basal cell carcinoma [2]. Dermoscopy is a useful non-invasive diagnostic tool in differentiating various benign and malignant skin tumors. However, the dermoscopic features of schwannomas remain largely unknown.

Case Presentation

Cases of histopathologically confirmed schwannoma with available clinical and dermoscopic photographs from the Department of Dermatology, Seoul National University Hospital from 2016 to 2021 were analyzed. A total of 4 patients (2 males, median age 38.5 [range 30-47] years) were included. All patients presented with palpable dermal or subcutaneous nodules. Fifty percent were accompanied with pain or tenderness. Two were located on the head and neck, and 2 were located on the upper limb. The primary clinical

diagnoses of the patients included ganglion cyst, epidermal cyst, and lipoma. In all 4 patients, tumors were surgically removed. Histopathological examination revealed encapsulated spindle cell tumor with characteristic hypercellular and hypocellular areas, which is consistent with schwannoma. Polarized dermoscopy in half of the cases revealed a dermoscopic pattern of arborizing vessels with whitish translucent surfaces (Table 1 and Figure 1). Written informed consent for publication of clinical details and clinical images was obtained from the patients.

Conclusions

As schwannomas are usually located in the dermis and subcutaneous layer, dermoscopic findings may not be prominent. Nevertheless, in our case series, schwannomas demonstrated arborizing vessels and translucent surfaces on dermoscopy in half of the cases. Dermoscopic features of schwannoma have been reported previously in the literature [1,3]. One case report described multiple arborizing vessels and speckled pigmentation on a translucent yellowish surface [1]. These findings are similar to our cases. Therefore, we suggest that dermoscopy may help differentiate schwannoma

Table 1. Clinical and dermoscopic findings of four patients with schwannoma.

No	Sex	Age at first visit	Duration of disease	Location	Clinical features	Symptoms	Primary diagnosis	Dermoscopic features	Size of excised tissue (cm)
1	M	30	6 months	Dorsum of right 1 st finger	0.5 cm sized palpable dermal or subcutaneous nodule	(-)	Ganglion cyst	Whitish translucent surface with arborizing vessels	0.8 x 0.6 x 0.4
2	M	32	18 months	Right shoulder	Dermal or subcutaneous nodule	Tenderness	Epidermal cyst, lipoma	Whitish translucent surface with arborizing vessels	1.6 x 1.3 x 0.9
3	F	45	Unknown	Left anterior neck	Palpable dermal or subcutaneous nodule	(-)	Epidermal cyst	None	0.5 x 0.5 x 0.4
4	F	47	35 years	Left occipital scalp	3cm sized dermal or subcutaneous nodule	Pain	Lipoma, epidermal cyst	None	7.0 x 3.0 x 1.3

M = male; F = female.

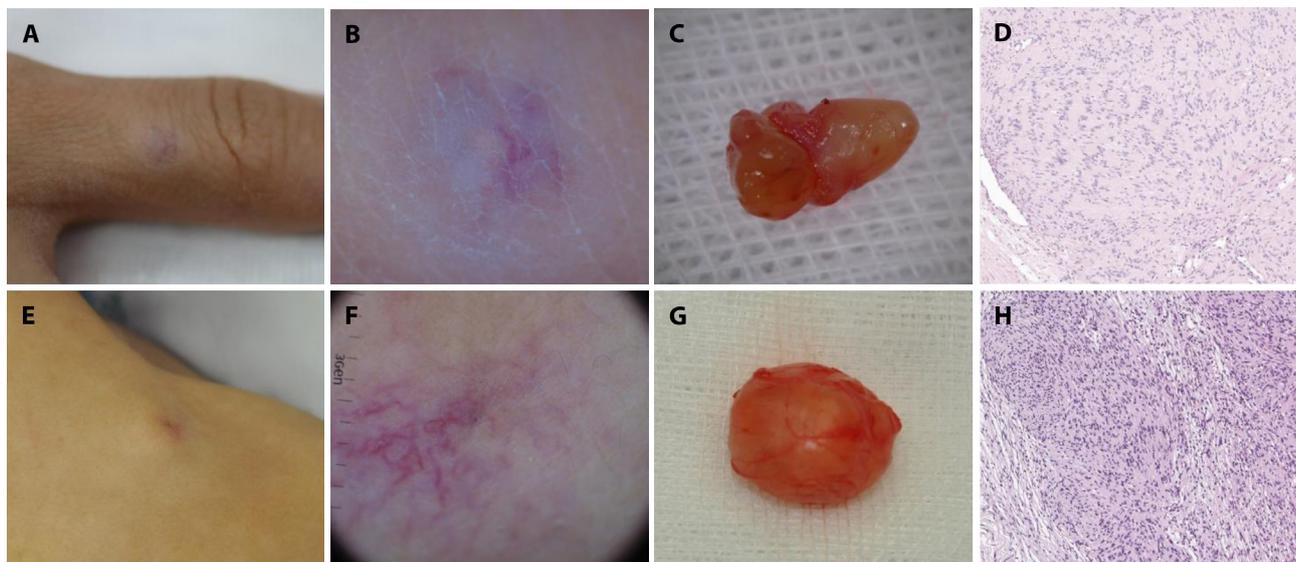


Figure 1. Clinical photographs (A,E). Dermoscopic image showing a whitish translucent structure with arborizing vessels (B,F). Photographs of surgically excised tumors (C,G). A histopathologic study revealed an encapsulated spindle cell tumor with a characteristic hypercellular Antoni A area and hypocellular Antoni B area. (D,H; H&E; original magnifications: x100).

from other dermal or subcutaneous tumors in select cases by narrowing down the differential diagnosis. Dermoscopic patterns of neurofibromas include peripheral pigmented networks and pink-red structureless areas [4]. Epidermal cysts present a distinctive central punctum [5]. Dermoscopic patterns of intradermal nevus include pigmented structures such as dots, globules, and comma-like vessels [6]. Although

basal cell carcinoma presents arborizing vessels, additional features include blue-gray ovoid nests, leaf-like structures, ulceration, multiple small erosions, and spoke-wheel pigmentations [6].

The limitations of our study include its small sample size. In addition, as we excised the tumors with linear incision and extirpation methods, we could not investigate

the association between the location or depth of the tumors and the presence of dermoscopic findings in schwannomas. Further studies are warranted to elucidate the dermoscopic patterns of schwannomas.

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