

Case Report

## Verrucous Hemangioma: A diagnosis to consider

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**Abstract:** Verrucous Hemangioma (VH) is a vascular malformation and may be consider as one of the variants of either capillary or cavernous hemangioma. Although invariably present at birth, VH may appear later, even in adult age. The linear or serpiginous form of verrucous hemangioma is extremely rare, and only a few case reports have been presented. Here we report a case of verrucous hemangioma which presented in the right leg.

**Keywords:** Verrucous Hemangioma (VH), vascular malformation, hemangioma

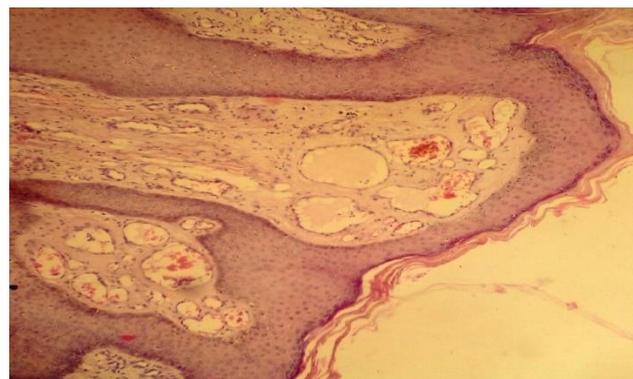
### INTRODUCTION

Verrucous Hemangioma (VH) is a vascular malformation and may be consider as one of the variants of either capillary or cavernous hemangioma [1]. Although invariably present at birth, VH may appear later, even in adult age. It usually presents as papules, plaques and nodules of bluish erythematous color with verrucous or irregular surface with unilateral distribution preferably located in lower limb. It may tend to grow proportionally with body development [2]. Clinically the lesion is often misdiagnosed as Angiokeratoma or simple hemangioma but it is the distinct histopathology that confirms the diagnosis of verrucous hemangioma from the two entities. The linear or serpiginous form of verrucous hemangioma is extremely rare, and only a few case reports have been presented [3, 4]. Here we report a case of verrucous hemangioma which presented in the right leg.

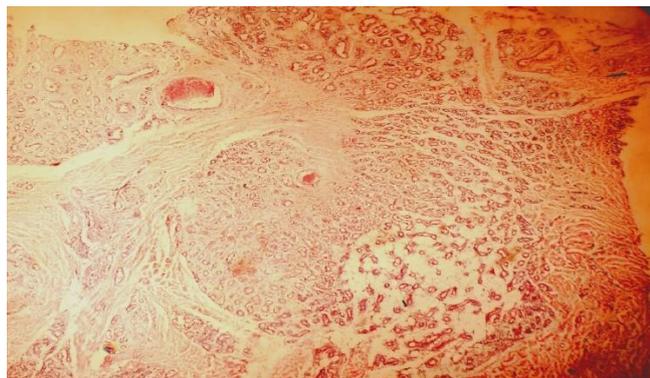
### CASE REPORT

A 28-year-old male patient presented with an asymptomatic lesion with onset during the infancy, located at medial aspect of right leg and it was found progressing in size. The lesion started as a small maculoplaque eruption. There were history of occasional itching and bleeding and that caused the patient to seek medical advice. On examination, the lesion was well-circumscribed, hyperkeratotic, red plaque present in a linear distribution over the medial

aspect of the right leg. Surface of the lesion was verruciform and showed crusting at places. Histopathological examination was done and it revealed epidermal hyperkeratosis, irregular acanthosis with focal ulceration. Papillary dermis showed numerous dilated thin-walled capillaries of various sizes extending down into the deeper dermis and subcutaneous tissues [Figure 1 and 2]. Based on these findings, the diagnosis of verrucous hemangioma was made.



**Fig 1: Epidermal hyperkeratosis, irregular acanthosis and Paillary dermis shows dilated blood vessels (H &E, 10X)**



**Fig 2: Lobules of thin-walled capillaries of various sizes extending down into the deeper dermis (H &E, 10X)**

## DISCUSSION

Verrucous hemangioma is a rare, congenital vascular malformation of the cutaneous and subcutaneous tissues with a predilection for the lower extremities [4]. They can be found in the head, trunk and limbs; although in the literature the most commonly reported sites are the legs. Although almost invariably present at birth, it may appear later or even in adult life [4, 5]. It initially appears as a bluish macule that later gets an erythematous-violaceous colour, and following trauma and secondary infections, often evolves into a verrucous plaque/nodule [6, 7].

The term “verrucous hemangioma” was first used by Halter in 1937, but as a distinct entity, it was first described by Imperial and Helwig in 1967, defined it as congenital vascular malformation, comprising the capillary or cavernous hemangioma in the dermis and subcutaneous tissue, associated with the reactive epidermal acanthosis, papillomatosis, and hyperkeratosis, distinguishing it from angiokeratoma [8].

Often misdiagnosed clinically as angiokeratoma or simple hemangioma, it is the distinct histopathology that helps to differentiate between these entities [8, 9]. The histopathological diagnosis closely resembles an angiokeratoma, as both lesions show vascular spaces just beneath a papillomatous and hyperkeratotic epidermis. However, in contrast to angiokeratoma, the vascular spaces in verrucous hemangioma also involve the lower dermis and subcutaneous tissues. In fact, verrucous hemangiomas are true vascular malformations; unlike angiokeratomas, which represent telangiectasias secondary to injury [9].

In verrucous haemangiomas, categorisation as a neoplasm or malformation cannot be established definitely. Its classification is still unclear because it exhibits clinical features similar to those seen in vascular malformations, but expresses an immunoprofile similar to vascular neoplasms (WT1 and Glut-1 positivity) [10]. Early diagnosis and intervention may be important in selected patients to a better cosmetic outcome. Incomplete excision would lead to recurrence of the lesion because of the involvement of deeper components [11].

## REFERENCES

1. Fitzpatrick TB, Eisen AZ, Wolff K, Freedberg IM, Austen KF. *Dermatology in general Medicine*. 4th Ed. New York: McGraw Hill; 1993: 1219.
2. Tan YY, Seah CS, Tan PH. Verrucous hemangioma: A case report. *Ann Acad Med Singapore* 1998; 27:255-7.
3. Kawaguchi H, Kawaguchi T, Ishii N, Nakajima H, Ichiyama S. Verrucous hemangioma. *Acta Derm Venereol* 1997; 77:405-6.
4. Cazal Zúñiga A, Naquira Vildoso N. Angioma verrucoso congénito. *Rev. chil. Dermatol.* 1996; 12(3):158.
5. Hayashi H, Shimizu T, Nakamura H, Shimizu H. Linear verrucous haemangioma on the abdomen. *Acta Dermatovenereologica-Stockholm*. 2004 Jan 1; 84(1):79-.
6. Wentscher U, Happle R. Linear verrucous hemangioma. *Journal of the American Academy of Dermatology*. 2000 Mar 31; 42(3):516-8.
7. Klein JA, Barr RJ. Verrucous hemangioma. *Pediatr Dermatol* 1985; 2:191-3.
8. Imperial R, Helwig EB. Verrucous hemangioma: a clinicopathologic study of 21 cases. *Archives of dermatology*. 1967 Sep 1; 96(3):247-53.
9. Caldusch L, Ortega C, Navarro V, Martínez E, Molina I, Jordá E. Verrucous hemangioma: report of two cases and review of the literature. *Pediatric dermatology*. 2000 May 1; 17(3):213-7.
10. Trindade F, Torrelo A, Requena L, Tellechea Ó, Del Pozo J, Sacristán F, Esteve-Martínez A, de Unamuno B, de Miquel VA, Colmenero I. An immunohistochemical study of verrucous hemangiomas. *Journal of cutaneous pathology*. 2013 May 1; 40(5):472-6.
11. Caro WA. Tumours of the skin. In: Moschella SL, Pillsbury DM, Hurley HJ, editors. *Textbook of Dermatology*. Philadelphia: WB Saunders; 1975: 1383.