

PhotoDermDiagnosis

Hyperkeratotic, tender, firm lesions on left leg of a 22 years old male

Ghazala Butt, Muhammad Arslan Ibrahim, Aimen Maqsood, Bushra Bashir, Ijaz Hussain

Department of Dermatology, King Edward Medical University, Mayo Hospital, Lahore

Abdul Manan, 22 Years old male, unmarried, Police Constable by profession presented in the OPD of Dermatology, Mayo Hospital, Lahore with complaints of hyperkeratotic lesions on front of left leg, very painful to touch, bleeds even on minor trauma. Patient had these two lesions since birth, very slowly progressive with time, did not regress during its course. Sometimes on scratching the lesion, bleeding occurred. Patient had no history of any bleeding from any other site or easy bruisability. Systemic review was insignificant except bone pain in left leg, dull in character and aggravated by any minor trauma or prolonged standing.

Examination shows two lesions in front of left leg in upper one third, round in shape black coloured, hyperkeratotic 1-2 cm in diameter, soft in consistency and very tender to touch. Biopsy findings are shown in **Figure 2a & 2b**.



Figure 1 Patient left leg shows hyperkeratotic verrucous lesions.

What is the diagnosis?

Address for correspondence

Dr. Ghazala Butt, Assistant Professor,
Department of Dermatology, Unit I,
King Edward Medical University/ Mayo
Hospital, Lahore
Email: ghazalakashmiri@gmail.com

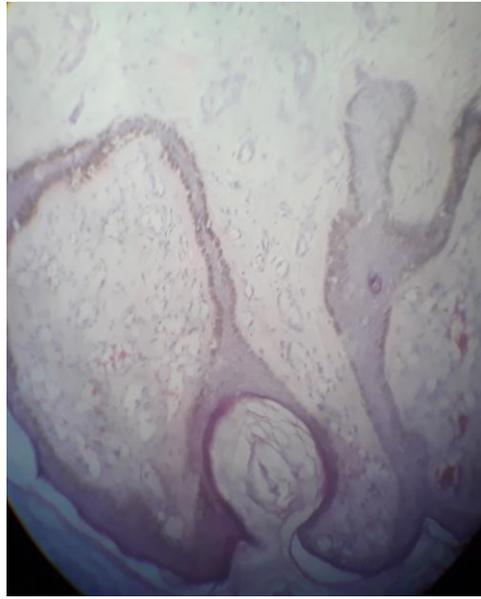
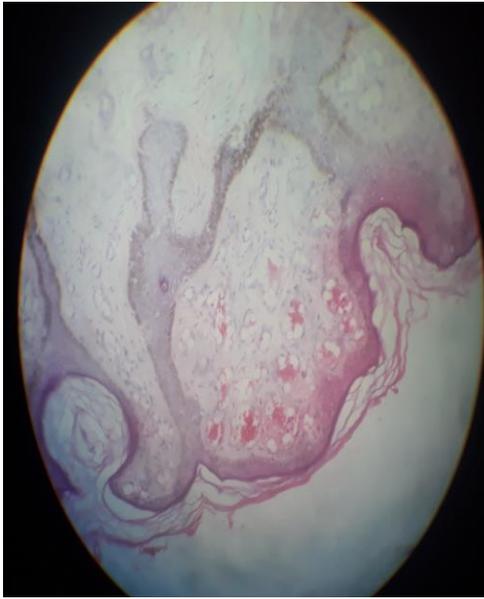


Figure 2a & 2b Biopsy showed endothelial lined channels filled with blood



Figure 3 Magnified view of lesions shows hyperkeratosis



Figure 4 Radiological view of left leg showing lytic lesion

Diagnosis

Verrucous Hemangioma

Discussion

Verrucous hemangioma reported in the literature has variety of names such as hemangioma unilaterialis neviforme, unilateral verrucous hemangioma, angiokeratoma circumscriptum neviforme, nevus vascularis unius lateralis, keratotic hemangioma, nevus angiokeratoticus, nevus keratoangiomatosus and papulous

angiokeratoma.¹ In 1967, the term "verrucous hemangioma," was introduced and defined by Imperial et al. as a congenital vascular malformation comprising of a capillary hemangioma or cavernous hemangioma in the dermis and subcutaneous tissue associated with reactive epidermal acanthosis, papillomatosis and hyperkeratosis distinguishing it from angiokeratoma.²

Mostly verrucous hemangiomas are located on the lower extremities and involvement is unilateral generally. Lesions are usually present since birth or have appeared in early childhood, although they may appear later or even in adult life.^{3,4} In our case the lesions are present since birth and involved left leg of the patient. The early clinical lesions of verrucous hemangioma are non-keratotic, soft, and bluish-red in color. Over time they progress to enlarge and gradually become hyperkeratotic and verrucous, usually followed by trauma and/or infection. Verrucous hemangioma presentation is circumscribed, warty papules or plaques or as papules and nodules arranged in linear or serpiginous configuration.⁴

There is a variant described in which there are many lesions mostly in a disseminated pattern, without evidence of systemic involvement.⁵ Another variant, known as digital verrucous fibroangioma is a distinct clinical and pathological entity and consists of dome shaped nodules on the dorsum of the fingers.⁶

The diagnosis of verrucous hemangioma is mainly established by histopathological examination, clinical correlation is required to support the diagnosis.¹ Histologically, verrucous hemangioma shows hyperkeratosis, variable epidermal acanthosis and papillary telangiectasias overlying a deep cavernous or capillary hemangioma. The histological appearance closely resembles an angiokeratoma.

However, contrary to angiokeratoma, the vascular spaces affect the lower dermis and subcutaneous tissues in verrucous hemangioma.

The differential diagnoses of verrucous hemangioma on clinical grounds are Cobb syndrome, angiokeratoma, lymphangioma circumscriptum, angioma serpiginosum, verrucae, and pigmented tumors.⁴

Verrucous hemangiomas do not resolve on their own and are relapsing in nature. Early diagnosis is important to get a better cosmetic result. Verrucous hemangioma requires a wide excision. Inadequate excision causes recurrence because of deeper components. Cryosurgery, electrocautery and laser therapy can be used if lesions are smaller.³ Yang and Ohara performed surgery in combination with pulse dye laser, CO₂ laser or argon laser in 23 patients with verrucous hemangioma and reported that a combination approach using surgical reconstruction and laser is necessary for large and extensive lesions.⁷ Surgery with adequate margins was performed in our patient and the result was good with no recurrence after one year.

To summarize, diagnosis of verrucous hemangioma should be considered in vascular papules, nodules, and plaques, especially those with a hyperkeratotic nodular appearance located on the lower extremities and it must be confirmed by histopathological examination.

References

1. Calduch L, Ortega C, Navarro V, Martínez E, Molina I, Jordá E. Verrucous hemangioma: report of two cases and review of the literature. *Pediatr Dermatol*. 2000; 17(3): 213-7.
2. Imperial R, Helwig EB. Verrucous haemangioma: a clinicopathological study of twenty one cases. *Arch Dermatol* 1967; 96(3): 247-53.

3. Wang G, Li C, Gao T. Verrucous hemangioma. *Int J Dermatol*. 2004; 43(10): 745-6.
4. Jain VK, Aggarwal K, Jain S. Linear verrucous hemangioma on the leg. *Indian J Dermatol Venereol Leprol*. 2008; 74(6): 656-8.
5. Cruces MJ, de la Torre C. Multiple eruptive verrucous hemangiomas: a variant of multiple hemangiomas. *Dermatologica* 1985; 171: 106-11.
6. Kohda H, Narisawa Y. Digital verrucous fibroangioma: a new variant of verrucous hemangioma. *Acta Derm Venereol* 1992; 72: 303-4.
7. Yang CH, Ohara K. Successful surgical treatment of verrucous hemangioma: a combined approach. *Dermatol Surg*. 2002; 28(10): 913-19.