Verrucous Hemangioma: A New Mode of Presentation with Literature Review

Khalil I. Alhamdi[1], Dooha K. Alhamdi[1], Rand A. Almuhyi[2]

From the [1]Department of Medicine, College of Medicine, University of Basrah, Basrah, Basra Governorate, [2]Department of Medicine, Al Zahra College of Medicine, University of Basrah, Basrah, Basra Governorate, Iraq
E-mail: doha.ismail@uobasrah.edu.iq

Indian J Dermatol 2026:71(1):71-3

Dear Editor,

Verrucous hemangioma (VH) is a rare, congenital, capillary or cavernous hemangioma that is presents at birth or very early in life, but unlike other hemangiomas, it does not undergo spontaneous involution. It is often unilateral, with the lower extremities being the most common site.[1]

It appears as welldefined dark red macular areas that later develop into soft bluish-red vascular swelling. Over time, the lesions take on a characteristic bluish-black hue and develop a warty surface.[2]

The differential diagnosis includes all hyperkeratotic vascular tumors and malformations, especially angiokeratoma. The final diagnosis of verrucous hemangioma is performed by a histopathological examination of a deep biopsy, though clinical correlation is necessary an accurate diagnosis. Histological features resemble angiokeratoma;. However, in verrucous hemangioma, vascular proliferation extends into the deep dermis and subcutaneous fat.[3]

Verrucous hemangiomas do not resolve spontaneously and require large, deep excision, as the chances of recurrence are high.[4] Here we report a case of keratoacanthoma-like verrucous hemangioma, which to the best of our knowledge, is the first such case reported worldwide with this mode of presentation.

A 58- year- old man presented to our outpatient clinic with an asymptomatic skin nodule on his right forearm.

This lesion had been present since childhood and progressively enlarged over 51 years. It had been surgically removed three times previously. though the histopathological reports of the previous excisions were unavailable, and recurrence was noted within a few months after each time. Written consent was obtained from the patient.

There was no history of any bleeding or ulceration over the lesion. Personal and family histories were unremarkable.

A dermatological examination, showed [Figure 1a and b], showed a solitary, well-circumscribed nodule, with a central hyperkeratotic plug. The nodule which measured 2 × 3 cm, had a firm and noncompressible surface and its clinical appearance simulated keratoacanthoma. No pulsation was detected by palpation and regional lymph nodes were not enlarged. The patient's vital signs were normal.

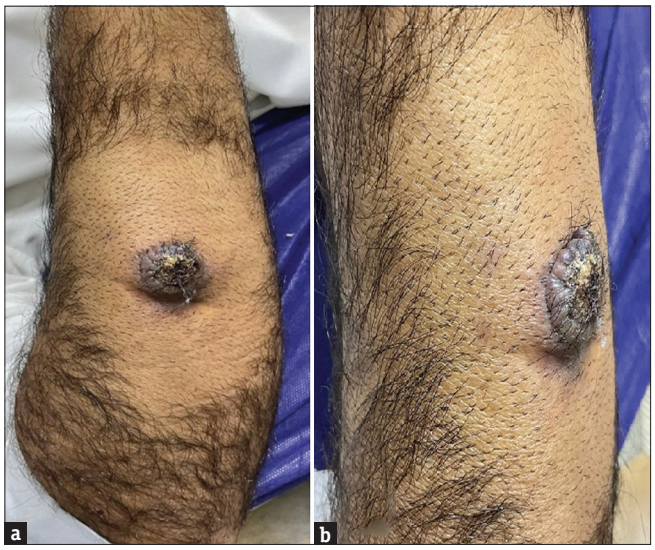

Figure 1: (a and b) Well-circumscribed nodule, with central crater liker hyperkeratotic plug on the forearm

Dermoscopic examination, shown in [Figure 2], revealed prominent hyperkeratosis, and the periphery of the lesion showed well-defined dark bluish-black lacunae characteristic of vascular lesions.

Histologically as shown in [Figure 3a and b], there was marked pseudoepitheliomatous hyperplasia of the epidermis, along with hyperkeratosis, papillomatosis, and hypergranulosis. In the underlying dermis, down to the subcutaneous tissue, there were proliferating blood vessels embedded in a fibrous stroma.

A diagnosis of verrucous hemangioma was made, and the patient was referred to a surgeon for deep surgical excision.

The International Society for the Study of Vascular Anomalies classifies vascular anomalies into proliferative vascular lesions (tumors) and vascular malformations.[5] Vascular tumors, such as infantile hemangiomas, tend to regress with a child's growth and show positive expression of WT1 (Wilms tumor 1 protein) and GLUT1 (glucose transporter-1 protein). In contrast, vascular malformations grow proportionally with the child and do not display involution or positive WT1 or GLUT1.[5]

In verrucous hemangioma, clinical and histopathologic findings overlap and are insufficient to categorize it as a tumor or a malformation. It exhibits clinical features similar to vascular malformation but expresses an immunoprofile similar to vascular tumors (WT1 and Glut-1 positivity).[3]

VH is usually noted at birth or early childhood and increases in size with age. The lesion appears as a bluish-red macule, which later takes on a characteristic bluish black color. Following trauma or secondary infections, it often evolves into a verrucous hyperkeratotic nodule. While verrucous hemangioma is typically occurs on the lower extremities; it can be present in unusual anatomical locations, such as the abdomen and scalp.[6]

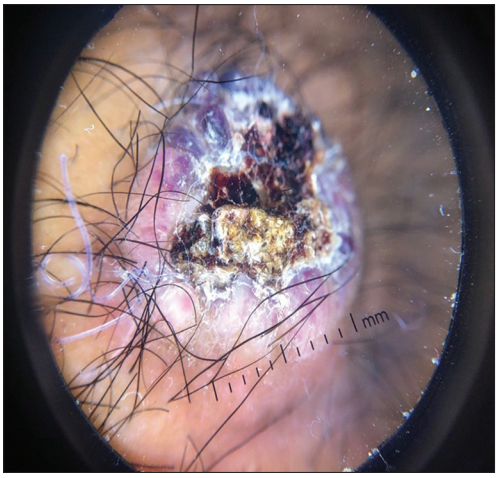

Figure 2: Dermoscopy showed prominent hyperkeratosis and well-defined dark bluish-black lacunae at the periphery

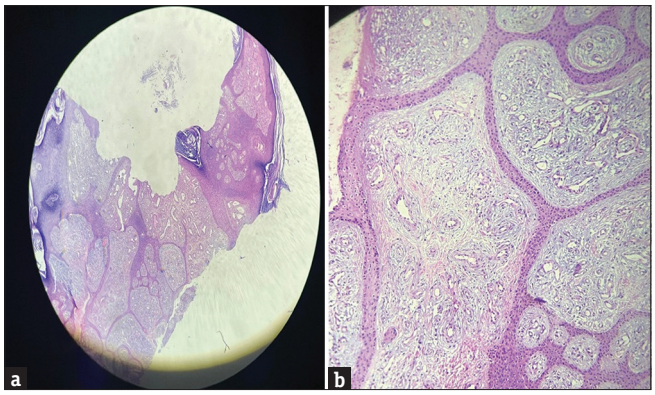

Figure 3: Biopsy specimen from the nodule (hematoxylin and eosin) (a) Histopathological findings showed hyperkeratosis, papillomatosis, hypergranulosis, and marked pseudoepitheliomatous hyperplasia of the epidermis with proliferating blood vessels in the dermis. (b) Proliferating blood vessels embedded in the fibrous stroma of the dermis

There are many reported cases in literature of VH, Bindhuja J *et al*.[7] reported a 68 year old male patient with VH above his left medial malleolus in 2013. On the other hand, Siddiqui F *et al*. represented 14-year-old girl with hyperpigmented VH at the lower third of her right leg at 2021.[8]

In the present case, the clinical picture is asymptomatic nodule with a central crater-like hyperkeratotic plug that simulate keratoacanthoma, which was atypical new unreported presentation of VH. The lesion increased in size with age, showed no tendency for spontaneous resolution, and had frequent recurrences, Additionally, the dermoscopic features raised a high suspicion for VH in this patient. The histopathology showed pseudoepitheliomatous hyperplasia, hyperkeratosis, acanthosis, papillomatosis, and abnormal vascular spaces involving both the superficial and deep dermis, extending into the subcutis, confirming the diagnosis of VH.

The dermoscopic features of our case revealed prominent hyperkeratosis with dark bluish-black lacunae, which had not been described previously described in the literature as characteristic of VH.

The differential diagnosis includes angiokeratoma and other vascular and lymphatic malformations. Additionally, it may clinically mimic verrucous carcinoma and malignant melanoma[9] as reported by Vijayan *et al*.,[9] and Perez-Varela *et al*.[10] respectively.

Verrucous hemangiomas is an uncommon vascular lesion that can present with an atypical clinical picture. It should be considered in the differential diagnosis to avoid misdiagnosis and to ensure adequate deep surgical excision, reducing the chance of recurrences.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

1. Fatani M. Al Otaibi H. Mohammed M. Hegazy O. Verrucous hemangioma treated with electrocautery. Case Rep Dermatol 2016;8:112-7.
2. Sandhu I, Singh H. A case report of a patient with linear verrucous hemangioma. Saudi J Med Med Sci 2016;4:118-20.
3. Mestre T, Amaro C, Freitas I. Verrucous haemangioma: A diagnosis to consider. BMJ Case Rep 2014;2014:bcr2014204612. doi: 10.1136/bcr-2014-204612.
4. Koc M, Kavala M, Kocatürk E, Zemheri E, Zindanci I, Sudogan S, *et al*. An unusual vascular tumor: Verrucous hemangioma. Dermatol Online J 2009;15. doi: 10.5070/D36w02r8xp.
5. Oppermann K, Boff AL, Bonamigo RR. Verrucous hemangioma and histopathological differential diagnosis with angiokeratoma circumscriptum neviforme. An Bras Dermatol 2018;93:712-5.
6. Y Krishnegowda S, Kumar S. A case report and brief review of the literature of an unusual vascular malformation: Linear verrucous hemangioma. Iran J Dermatol 2015;18:65-8.
7. Bindhuja JA, Rajendiran SA, Priyathersini NA. Verrucous hemangioma: A rare vascular tumor-A case report. Sri Ramachandra J Med 2013;6:19-20.
8. Siddiqui FA, Al-Khalaf J, Al-Marzooq Y, Khan K. Verrucous hemangioma: A rare and distinct entity. Curr Med Issues 2021;19:50-3.
9. Vijayan P, Ponniah A, A.M B, Ilias LM. Verrucous hemangioma: A clinical mimic of verrucous carcinoma. J Turk Acad Dermatol 2016;10:16103c7. doi: 10.6003/jtad.16103c7.
10. Perez-Varela L, Pozo JD, Pineyro F, Sacristan F, Pena C, Fernandez-Jorge B, *et al*. Verrucous hemangioma mimicking melanoma in an elderly man. J Cosmet Dermatol Sci Applic 2011;1:153-6.

Access this article online

Quick Response Code:

Website: https://journals.lww.com/ijd

DOI: 10.4103/ijd.ijd_153_23

How to cite this article: Alhamdi KI, Alhamdi DK, Almuhyi RA. Verrucous hemangioma: A new mode of presentation with literature review. Indian J Dermatol 2026;71:71-3.

Received: February, 2023. **Accepted:** September, 2024.