International Journal of Science and Research (IJSR)
ISSN: 2319-7064
Impact Factor 2024: 7.101

Verrucous Hemangioma: A Mode of Presentation with Literature Review

Dr Nazan Shagufta

Assistant Professor, Department of Dermatology, Himalaya Medical College and Hospital, Paliganj, Patna, Bihar 801110, India
Email: *nazanshaguftaimam[at]gmail.com*

Abstract: ***The present case offers an insightful and unusual presentation of verrucous hemangioma (VH), a rare vascular anomaly that typically arises at birth and progresses with age. What makes this case compelling is the unusual keratoacanthoma - like morphology observed in a 58 - year - old male patient, whose lesion had persisted and recurred despite multiple surgical excisions over a span of five decades. Unlike the commonly reported locations such as lower extremities, this lesion manifested on the forearm and displayed a central crateriform hyperkeratotic plug, a feature rarely documented in literature. Dermoscopic examination revealed hyperkeratosis along with dark bluish - black lacunae findings that, in my view, add a novel dimension to the diagnostic criteria for VH. Histopathological analysis confirmed the diagnosis by showing deep vascular proliferation extending into the subcutis, distinguishing it from more superficial angiokeratomas. This suggests that VH may present with broader clinical variability than previously thought, emphasizing the need for histological correlation and deep biopsy to avoid misdiagnosis and ensure complete excision. Ultimately, this case enriches the clinical spectrum of VH and underscores the importance of considering it among differentials for chronic, hyperkeratotic vascular lesions.***

Keywords: verrucous hemangioma, keratoacanthoma - like lesion, vascular anomaly, hyperkeratosis, dermoscopy

Verrucous hemangioma (VH) is a rare, congenital, capillary or cavernous hemangioma that is presents at birth or very undergo spontaneous involution. It is often unilateral, with the lower extremities being the most common site. [1]

It appears as well defined 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, 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 a solitary, well-circumscribed nodule, with 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

Dermoscopic examination, revealed prominent hyperkeratosis, and the periphery of the lesion showed well-defined dark bluish-black lacunae characteristic of vascular lesions.

Histologically as shown in 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]

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.

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