A middle-aged man with a distinct erythematous firm nodule on his scalp

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CLINICAL PRESENTATION

A 41-year-old man referred to our dermatology clinic with an asymptomatic 2 by 1.5 cm erythematous firm nodule on his scalp. He stated that it had been growing in size gradually over the past three years. The patient had a history of pruritus but never felt any pain at the site of the nodule. In his physical exam, lymphadenopathy, discharge, and infection were not observed. There was no hair growth on the nodule's surface, and hair shafts around the skin lesion were more vellus than other sites of the scalp.

During the dermoscopic view, diffuse erythema with a few regular vessels on the surface was observed. Due to patient manipulation of the region, a small crust on the nodule was also seen (Figure 1).

Further observations did not result in any significant findings. His oral cavity and nails were normal, and his family history was negative for similar symptoms. Later on, an excisional biopsy was performed by the dermatologist.

what is your diagnosis?

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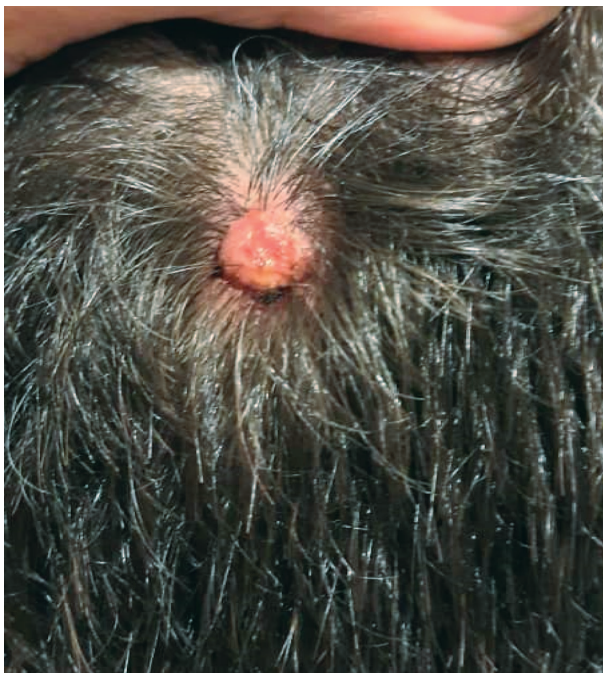

Figure 1. An asymptomatic, erythematous, firm nodule

DIAGNOSIS

Angiolymphoid Hyperplasia with Eosinophilia (ALHE)

Microscopic Findings

Microscopic examination showed acanthosis with focal erosion and crust formation. The dermis showed proliferation of small blood vessels with prominent plump endothelial cells (Figure 2) and mixed perivascular and interstitial inflammatory nest-like infiltration of lymphocytes, plasma cells, and eosinophils (Figure 3). Vesicular nuclei in acidophilic and vacuolated cytoplasms were detected in endothelial cells, indicating a hobnail appearance.

DISCUSSION

Angiolymphoid Hyperplasia with Eosinophilia (ALHE) is a rare benign dermatologic disease

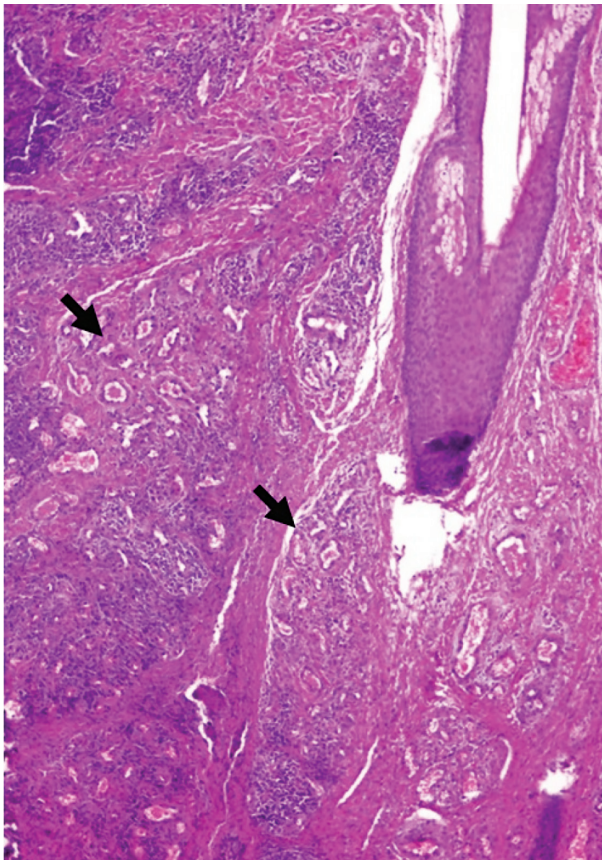

Figure 2. The proliferation of blood vessels with prominent plump endothelial cells in the dermis. H&E ×100

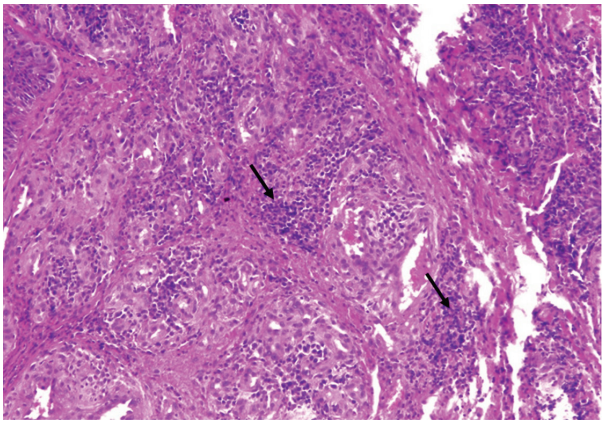

Figure 3. Perivascular and interstitial lymphocyte aggregation admixed with some eosinophils and plasma cells (arrows) in the dermis. H&E, ×200

that can occur in the periauricular area and scalp. This disease is race-related and usually occurs in Caucasian women [1]. It can transpire in different areas of the head and neck, such as the periauricular, scalp, oral cavity, pharynx, and orbital areas. An erythematous dome-shaped papule appears and can persist or recur; it is sometimes pruritic and painful. It should be noted that ALHE does not always resolve spontaneously [1,2].

This disease has two major components in pathology. One is the vascular component and the other one is the inflammatory part. Vessels are usually lined by enlarged endothelial cells, also known as plump endothelial cells [1]. Perivascular and sometimes interstitial infiltration of lymphocytes, plasma cells, and eosinophils can be found in the dermis [2].

The etiology of ALHE is idiopathic but there are several theories including a reactive process, a neoplastic process, or an infectious process possibly associated with HIV. Also in some cases, it may further develop to peripheral T-cell lymphoma [3]. In one study that considered the age at presentation, a wide age range (0.7 months to 91 years) was reported with a mean of 37.6 years. In children, ALHE is associated with a higher rate of recurrence after surgical excision, a longer duration of disease, and presentation as multiple lesions [4].

In ALHE, hypereosinophilia can be observed in 20% of cases, and elevated IgE levels might occur in few cases, representing the main difference between ALHE and Kiruma's disease.

In addition, the skin manifestation of ALHE is important because it can be misdiagnosed with

amelanotic melanoma or a variant of basal cell carcinoma.

To treat ALHE, surgical excision is the best method, but a recurrence can transpire in about 40% of all cases. Intralesional and topical corticosteroids and topical calcineurin inhibitors such as tacrolimus cream can also be beneficial [3-6].

Conflict of interest: None declared.

REFERENCES

1. Rook A, Wilkinson DS, Ebling F. Textbook of dermatology. Massachusetts: Blackwell Science; 1972.
2. Olsen TG, Helwig EB. Angiolymphoid hyperplasia with eosinophilia: A clinicopathologic study of 116 patients. J Am Acad Dermatol. 1985;12(5):781-96.
3. Guo R, Gavino ACP. Angiolymphoid hyperplasia with eosinophilia. Arch Pathol Lab Med. 2015;139(5):683-6.
4. Adler BL, Krausz AE, Minuti A, et al. Epidemiology and treatment of angiolymphoid hyperplasia with eosinophilia (ALHE): A systematic review. J Am Acad Dermatol. 2016;74(3):506-12.
5. Chacon A, Mercer J. Successful management of angiolymphoid hyperplasia with eosinophilia in a split-face trial of topical tacrolimus and timolol solution. G Ital Dermatol Venereol. 2014;151(4):436-40.
6. Gencoglan G, Karaca S, Ertekin B. Angiolymphoid hyperplasia with eosinophilia successfully treated with imiquimod. Dermatology. 2007;215(3):233-5.