

BRIEF ARTICLES

A Rare Case of Angiolymphoid Hyperplasia without Eosinophils, with Review of the Literature

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ABSTRACT

The epithelioid hemangioma, more commonly termed angiolymphoid hyperplasia with eosinophils, is a pathologic vascular proliferation characterized by a distinctive eosinophil-rich mixed inflammatory infiltrate. A nonspecific accompanying infiltrate has only rarely been reported, and may confound the diagnosis of this benign process with malignant mimics. We present such a case of angiolymphoid hyperplasia without eosinophils, and consider its diagnosis and pathogenesis within the spectrum of related entities.

CASE PRESENTATION

A 44-year-old female with a past medical history of a basal cell carcinoma was initially seen for a rapidly growing lesion located on the neck that was present for two months. Physical examination revealed a 6-mm red papule on the neck, yielding a differential diagnosis of a pyogenic granuloma versus basal cell carcinoma (Figure 1). A shave biopsy was performed and sent for histopathology. The biopsy revealed a polypoid lesion that contained many vascular spaces lined by large epithelioid cells (Figure 2, Figure 3). There was a dense inflammatory cell infiltrate composed of many small lymphocytes, predominantly CD3+, CD10–, mixed CD4+ versus CD8+ T-cells with a normal CD4:CD8 ratio, and scattered peripheral CD20+ B-cells on immunohistochemistry (Figure 2). Notably,

eosinophils were completely absent from the infiltrate.

DISCUSSION

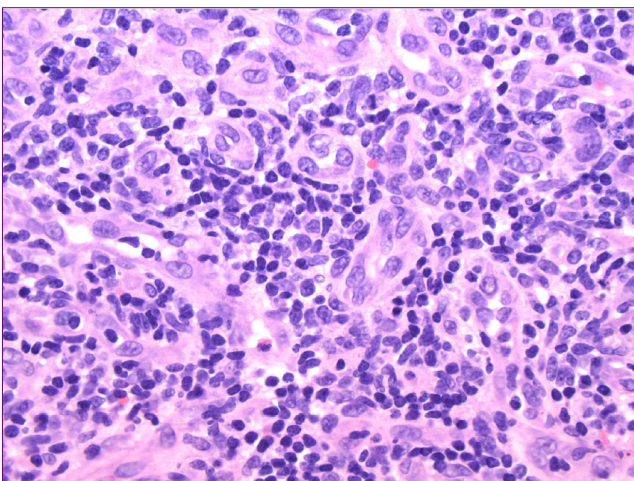
Angiolymphoid hyperplasia with eosinophils is part of a spectrum of vascular lesions known as “histiocytoid hemangiomas” (as coined by Rosai and colleagues),⁴ that typically have a benign but chronic course of natural history.³ Also known as “epithelioid hemangioma,” ALHE may be accompanied on the histiocytoid hemangioma spectrum by such conditions as Kimura disease (eosinophilic hyperplastic lymphogranuloma), pseudopyogenic or atypical pyogenic granuloma, papular angioplasia, inflammatory hemangioma, inflammatory angiomatoses, and atypical vascular proliferation with inflammation, among others.⁴ Historically, the term ALHE was

used synonymously with Kimura disease. The latter has since been considered distinct from the histiocytoid hemangiomas (given their epidemiology and histologic features),⁴ though cases of clinicopathologic overlap suggest that the two may represent different parts of a single disease spectrum.⁵

Figure 1. Pink papule on the lower neck prior to biopsy.



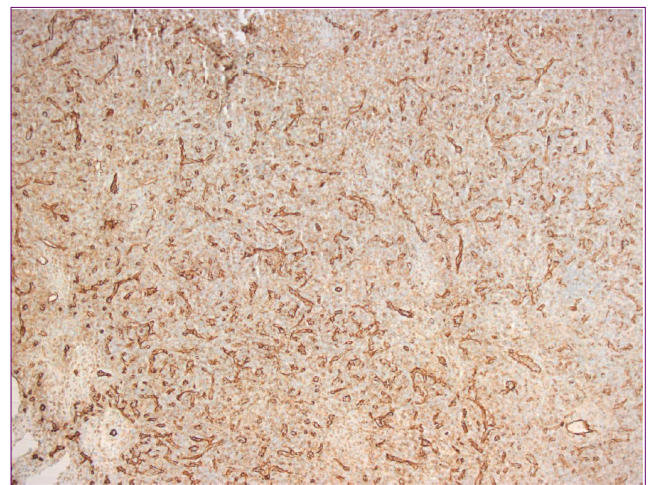
Figure 2. Heavy lymphocytic infiltrate surrounding vascular spaces with epithelioid-appearing endothelium. (H&E, 400X magnification)



The clinicopathologic similarities between ALHE and Kimura disease are indeed suggestive of a pathogenetic relationship, with both conditions characterized by anatomic propensity for the head and neck,

similar benign clinical courses, and eosinophilic inflammation with lymphoid hyperplasia on histopathology.⁵ Notable clinical differences include subcutaneous rather than dermal localization as well as prominent lymphadenopathy accompanied by peripheral eosinophilia in Kimura disease, which shows a predilection for Asian males.⁵ Interestingly, the histopathologic characteristics of lesional vessels in ALHE share less in common with Kimura disease than with some forms of pseudolymphoma. In particular, so-called pseudolymphomatous angiokeratoma features endothelial cell proliferation with morphology that has been likened to high-endothelial venules (HEVs).⁶ Although the epithelioid endothelial cells of ALHE are reminiscent of the HEV cuboidal cells, cytoplasmic vacuolation and “hobnail” protrusions into vessel lumina are more specific to ALHE.⁶ Additionally, the presence of thick-walled large vessels external to the foci of lymphoid hyperplasia may be more characteristic of pseudolymphomatous angiokeratoma.⁶

Figure 3. CD31 highlights numerous vascular spaces. (100X magnification)



Our case is interesting in that it had the characteristic histopathologic appearance of ALHE but lacked eosinophils, which would

otherwise further distinguish ALHE from other entities in the lymphoid hyperplasia spectrum. To our knowledge, there have been only three reported cases similar to ours in this respect: two occurred on the trunk in men in their early twenties, and one occurred on the mandible in a 40-year-old woman; each presented as a solitary erythematous papule.² Analogously, Kimura disease has rarely been observed without characteristic peripheral eosinophilia.⁷

ALHE is typically acquired, but congenital cases have also been reported.⁸ Although the etiology of ALHE remains unknown, proposed mechanisms have included reactive (inflammatory), neoplastic (both endothelial and lymphocytic), and infectious (e.g. HIV-related) processes.³ Reactive pathogenesis related to both immune-mediated and traumatic tissue insult are supported by reports of intralesional immune deposits (IgA, IgM, and C3)⁹ and of case development following local trauma.^{1,10} In contrast, immunohistochemical identification of intracytoplasmic Wilms tumor 1 (WT1) protein in ALHE has been offered as supporting a neoplastic origin, where WT1 expression may discriminate between vascular malformations and true neoplasia.¹¹ Additional suggested contributory factors include arteriovenous shunting and elevated serum estrogen levels.³

Untreated lesions typically persist for several years, with spontaneous regression noted in only 2 of 116 patients in a study by Olsen and Helwig,¹ though there has never been any report of metastasis.³ Although there is no evidence for malignant potential, local or distant recurrence can occur in up to one-third of cases, especially with only partial removal.³ A recent systematic review¹² identified conventional surgical excision as the most commonly employed and most

effective modality, notably followed in the latter category by laser techniques.

CONCLUSION

This case is a rare presentation of ALHE lacking the characteristic eosinophils. Whereas the absence of this distinctive trait presents a diagnostic challenge, exclusion of malignant alternatives in the differential is essential, with attention to epithelioid angiosarcoma and epithelioid hemangioendothelioma.³ Awareness of this atypical presentation of ALHE may thus be helpful in avoiding misdiagnosis of a malignant entity.

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