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Case Report

Ophthalmology Section

A Case of Recurrent Conjunctival Vascular Lesion in a Young Adult: A Clinicopathological Challenge

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ABSTRACT

Conjunctival vascular tumours are rare in adults and often pose diagnostic challenges due to overlapping features between haemangioma and lymphangioma. A 22-year-old male presented with painless, slowly enlarging mass in the left lower lid for five years. The lesion was excised in July 2021, and histopathology revealed conjunctival haemangioma. However, a residual mass remained and gradually increased in size, reaching 2.5×1 cm. A second excision was performed in July 2025, and histopathological examination demonstrated dilated vascular and lymphatic channels consistent with conjunctival lymphangioma. Postoperative course so far is uneventful and the patient remains recurrence free on three months follow-up. This case illustrates the diagnostic dilemma of conjunctival vascular tumours, especially when histopathological features vary between excisions. Recurrence may be related to incomplete excision or the co-existence of vascular and lymphatic components. Careful excision, histopathological confirmation, and long-term follow-up are essential as conjunctival vascular tumours are known for their recurrences. Recurrent conjunctival vascular lesions in adults require thorough evaluation, as haemangioma and lymphangioma may co-exist or mimic one another.

Keywords: Conjunctival haemangioma, Conjunctival lymphangioma, Recurrent conjunctival mass, Vascular tumour

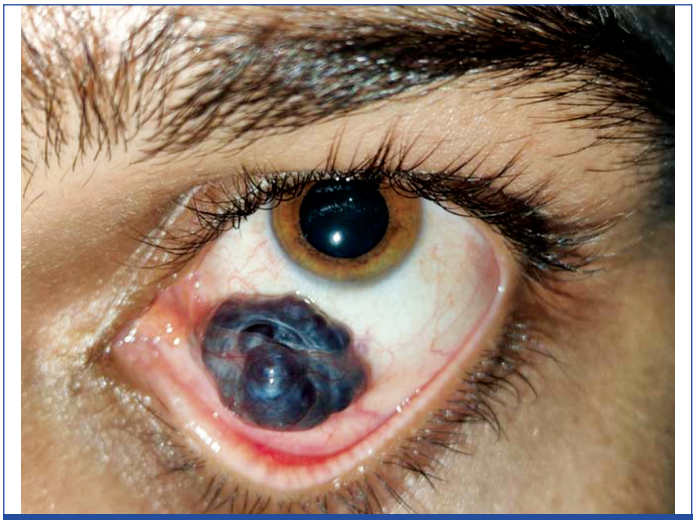
CASE REPORT

A 22-year-old male presented with painless, slowly enlarging swelling in the left eye lower lid present for five years. There were no visual complaints, no foreign body sensation or bleeding episodes that patient was aware of. There was no size fluctuation, however it was increasing gradually. There was no history of trauma. In the past, a similar lesion was present for which excision was performed in July 2021 elsewhere, and histopathological examination showed features of angiomatous proliferation confirming it to be conjunctival haemangioma. However, no histopathological images are available as it was done elsewhere. According to the patient, residual mass persisted and gradually enlarged and reached its current size when patient decided to do a repeat consultation.

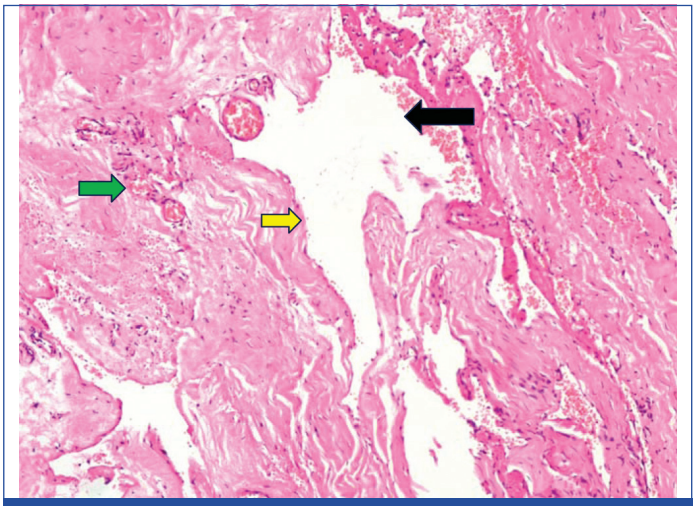
On examination, Best Corrected Visual Acuity (BCVA) was 6/6 and ocular movements were full and free. The lesion appeared as brown, lobular, vascular, elevated, cystic conjunctival mass with dilated vessels on it and it measured 2.5×1 cm in size [Table/Fig-1]. Intraocular Pressure (IOP) was 18 mmHg and no orbital involvement was there as ocular movements were full and free. Fundus examination was normal and transillumination test was negative.

After examination of mass, above findings were noted and a repeat excision biopsy was performed. Entire mass excision was done with cryotherapy to the margins and the sample was sent for histopathology. Haematoxylin and Eosin (H&E) staining at 40× magnification demonstrated fibromuscular tissue showing thick and thin-walled dilated vascular spaces lined by flattened endothelium. Occasional lymphoid aggregates were found in surrounding tissue [Table/Fig-2]. Histopathology reports diagnosed it as conjunctival lymphangioma with free margins.

The postoperative course has been uneventful so far, and there has been no recurrence on three months follow-up.



[Table/Fig-1]: Pre-operative image showing 2.5×1 cm brown coloured, lobulated, vascular, elevated, cystic conjunctival mass with dilated vessels.



[Table/Fig-2]: Histopathological image {Haematoxylin and Eosin (H&E); 40× magnification} showing cystic, dilated vascular space (black arrow), flattened endothelial cell lining (yellow arrow) and lymphoid aggregates (green arrow).

DISCUSSION

Conjunctival vascular lesions are uncommon in adults. Population-based incidence rates per million for isolated conjunctival haemangioma and lymphangioma are not well established due to their rarity and dependence on institutional case series rather

than epidemiological registries [1,2]. However, in a large clinical series of 140 conjunctival vascular tumours, lymphangioma/lymphangiectasia accounted for approximately 36% of cases, whereas capillary haemangioma and other haemangioma subtypes together comprised approximately 28% of lesions [1]. This suggests that lymphangiomatous lesions may be at least as frequent as haemangiomas among benign conjunctival vascular tumours encountered in tertiary referral practice.

The natural history of these two entities differs significantly. Capillary haemangiomas are true vascular tumours characterised by endothelial proliferation and a proliferative phase followed by spontaneous involution in infancy [3,4]. Adult-onset conjunctival haemangiomas, however, tend to remain stable and do not exhibit spontaneous regression [2]. In contrast, lymphangiomas are hamartomatous vascular malformations composed of dilated lymphatic channels [5]. They lack a true capsule and infiltrate adjacent tissues, leading to slow progressive enlargement. Sudden increase in size may occur due to intralesional haemorrhage, producing the characteristic "chocolate cyst" appearance [5,6]. Unlike haemangiomas, lymphangiomas do not involute spontaneously [5].

Recurrence patterns also differ. Conjunctival haemangiomas, when completely excised, generally demonstrate low recurrence rates, and most published adult case reports have not documented recurrence during follow-up [2,7]. In contrast, lymphangiomas exhibit a greater tendency for recurrence because of their infiltrative growth pattern and absence of encapsulation [5,6]. Although precise recurrence rates for isolated conjunctival lymphangiomas are not available in large conjunctival cohorts, studies of orbital and ocular adnexal lymphangiomas have reported recurrence rates ranging from 50% to 70% following surgical intervention, particularly in diffuse lesions [6,8]. This higher recurrence tendency is attributed to difficulty in achieving complete excision.

An important consideration is the presence of hybrid or mixed vascular malformations containing both blood vascular and lymphatic components. Such combined lesions are well documented and may explain histopathological variability between specimens obtained at different times [3,6,9]. Sampling limitation during the initial excision or predominance of one component can lead to an initial diagnosis of haemangioma, whereas subsequent excision may reveal lymphangiomatous features. Immunohistochemical markers such as CD31 and CD34 (vascular endothelium) and D2-40 (lymphatic endothelium) may assist in distinguishing these components where diagnostic uncertainty exists [9,10].

The differential diagnosis of a vascular conjunctival mass in a young adult includes pyogenic granuloma (lobular capillary haemangioma), Kaposi sarcoma, conjunctival melanoma with prominent vascularity, conjunctival varix, reactive lymphoid hyperplasia, and conjunctival lymphangiectasia [1,3,5]. Pyogenic granuloma typically presents as a rapidly growing, friable red lesion often associated with prior surgery or inflammation [1]. Kaposi sarcoma should be considered particularly in immunocompromised individuals and usually demonstrates spindle cell proliferation on histopathology [3]. Conjunctival melanoma may occasionally mimic vascular lesions clinically but demonstrates atypical melanocytic proliferation histologically [1]. Reactive lymphoid hyperplasia presents as a salmon-pink lesion rather than a cystic vascular mass [3]. Lymphangiectasia, although related to lymphangioma, is characterised by dilated lymphatic channels without true hamartomatous proliferation [5]. Histopathological evaluation remains essential to distinguish among these entities.

Previous case reports and series have described similar diagnostic challenges. Shields JA et al., reported conjunctival vascular tumours with overlapping clinical features requiring histopathological confirmation [1]. Rootman J et al., characterised lymphangiomas as part of a spectrum of haemodynamically isolated vascular hamartomas often containing mixed vascular elements [6]. However, recurrent conjunctival vascular lesions in young adults with discordant histopathological diagnoses between successive excisions remain uncommon in the literature [11].

In the present case, the lesion was initially diagnosed as conjunctival haemangioma following excision. Persistence of residual mass and gradual enlargement over four years suggests either incomplete excision or the presence of a mixed vascular malformation with an underlying lymphangiomatous component that was not adequately sampled during the first procedure. The second excision demonstrated dilated vascular and lymphatic channels with lymphoid aggregates, consistent with conjunctival lymphangioma. The absence of recurrence at three months follow-up is encouraging; however, long-term monitoring is warranted given the documented higher recurrence tendency of lymphangiomatous lesions [6,8].

This case underscores three important clinical points:

a) Conjunctival vascular lesions in adults are rare and lack precise population incidence data;

b) Lymphangiomatous lesions may represent up to one-third of conjunctival vascular tumours in tertiary series; and

c) Recurrence risk is generally lower for haemangiomas but significantly higher for lymphangiomatous malformations due to their infiltrative nature, necessitating meticulous excision and prolonged follow-up.

CONCLUSION(S)

Conjunctival haemangioma and lymphangioma are rare in adults and may mimic each other clinically and histologically. Recurrence and histopathological variability necessitate careful excision, confirmatory biopsy, and long-term follow-up to ensure accurate diagnosis and management.

REFERENCES

[1] Shields JA, Mashayekhi A, Kligman BE, Shields CL. Vascular tumours of the conjunctiva in 140 cases. Ophthalmology. 2011;118(9):1747-53.
[2] Rao R, Shields CL. 2019. Overview and Classification of Conjunctival and Corneal Tumours. In: Chaugule, S., Honavar, S., Finger, P. (eds) Surgical Ophthalmic Oncology. Springer, Cham.
[3] Shields CL, Shields JA. Tumours of the conjunctiva and cornea. Indian J Ophthalmol. 2019;67(12):1930-48.
[4] Mulliken JB, Glowacki J. Hemangiomas and vascular malformations in infants and children: A classification based on endothelial characteristics. Plast Reconstr Surg. 1982;69(3):412-22.
[5] Pe'er J. Pathology of eyelid and conjunctival tumours. Indian J Ophthalmol. 2016;64(3):177-90.
[6] Rootman J, Hay E, Graeb D, Miller R. Orbital-adnexal lymphangiomas. A spectrum of hemodynamically isolated vascular hamartomas. Ophthalmology. 1986;93(12):1558-70.
[7] Nattis A, Perry HD, Rosenberg ED, Cocker R. Conjunctival capillary hemangioma. Cureus. 2017;9(11):e1892.
[8] Harris GJ, Sakol PJ, Bonavolontà G, De Conciliis C. An analysis of thirty cases of orbital lymphangioma. Pathophysiologic considerations and management recommendations. Ophthalmology. 1990;97(12):1583-92.
[9] Folpe AL, Veikkola T, Valtola R, Weiss SW. Vascular endothelial growth factor receptor-3 (VEGFR-3): A marker of vascular tumours with presumed lymphatic differentiation, including Kaposi's sarcoma, kaposiform and Dabska-type hemangioendotheliomas, and a subset of angiosarcomas. Mod Pathol. 2000;13:180-85.
[10] Kahn HJ, Bailey D, Marks A. Monoclonal antibody D2-40, a new marker of lymphatic endothelium, reacts with Kaposi's sarcoma and a subset of angiosarcomas. Mod Pathol. 2002;15(4):434-40.
[11] Seca M, Borges P, Reimão P, Gomes M, Meireles A. Conjunctival lymphangioma: A case report and brief review of the literature. Case Rep Ophthalmol Med. 2012;2012:836573.

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