Case Report

DOI: 10.7860/JCDR/2026/85286.22745

Ear, Nose and Throat Section

Medial Canthal Haemangioma Mimicking a Dermoid Cyst: A Diagnostic Challenge

G KARTHIKA[1], MK RAJASEKAR[2]

ABSTRACT

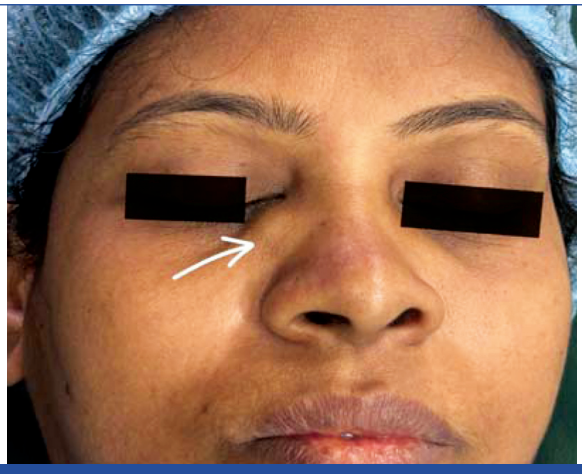
Haemangiomas are benign vascular neoplasms typically diagnosed in infants and rarely seen in adults. Their occurrence in the medial canthal region is particularly uncommon and may clinically mimic more frequent benign lesions such as dermoid cysts. This is a rare case of an adult-onset medial canthal capillary haemangioma that was initially misdiagnosed as a dermoid cyst, emphasising the diagnostic challenge posed by such presentations. A 46-year-old female presented with a 10-year history of a painless, slowly progressive swelling over the right medial canthus. The lesion was soft, mobile, non-tender, and measured approximately 0.5×0.5 cm, without associated visual disturbances or discharge. Based on clinical examination, a provisional diagnosis of dermoid cyst was made. The lesion was surgically excised under local anaesthesia, revealing a well-circumscribed, encapsulated soft mass. Histopathological analysis demonstrated proliferation of capillary-sized blood vessels lined by flattened endothelial cells within a fibrous stroma, confirming the diagnosis of capillary haemangioma. The postoperative period was uneventful, and no recurrence was noted at three months follow-up. Adult-onset periorbital haemangiomas are extremely rare, with few cases documented in the literature. Their clinical presentation frequently overlaps with dermoid cysts due to similar location, consistency, and benign nature. Misdiagnosis is therefore common, highlighting the need for a high index of suspicion. Unlike infantile haemangiomas, adult variants do not undergo spontaneous involution and often require surgical excision for definitive management. This case underlines the importance of considering vascular tumours in the differential diagnosis of long-standing periorbital swellings in adults. Accurate diagnosis through histopathological confirmation is essential to avoid mismanagement and contributes to the limited existing literature on this rare clinical entity.

Keywords: Benign orbital lesions, Periorbital region, Surgical excision

CASE REPORT

A 46-year-old female presented with a 10-year history of a painless swelling over the right medial canthus. The lesion was slowly progressive, non-tender, soft in consistency, and measured approximately 0.5×0.5 cm. There were no associated symptoms such as epiphora, discharge, visual disturbances. The patient had no significant past medical, surgical, or ocular history, and no history of trauma or prior orbital swelling.

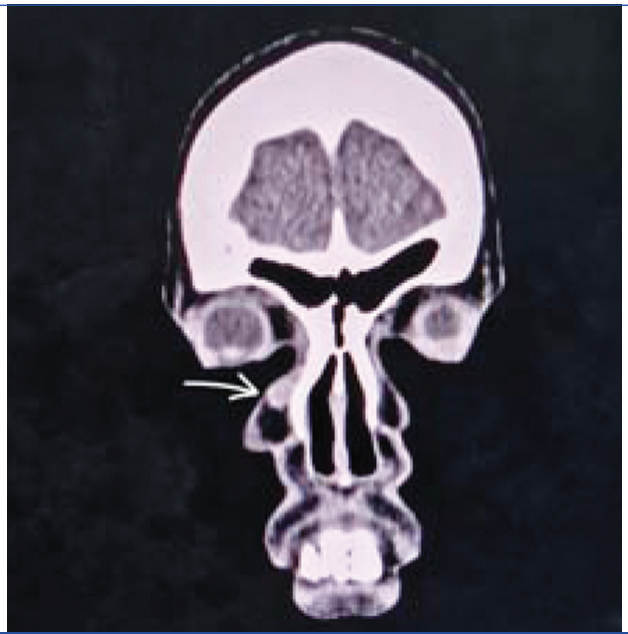
On clinical examination, the mass was mobile, non-adherent to deeper tissues, and without overlying skin changes [Table/Fig-1]. Based on its location and clinical features, a provisional diagnosis of dermoid cyst was made. The differential diagnoses considered included dermoid cyst, epidermoid cyst, dacryocystocele, lacrimal sac tumour, lymphangioma, and lipoma, consistent with lesions commonly encountered in the periorbital region.



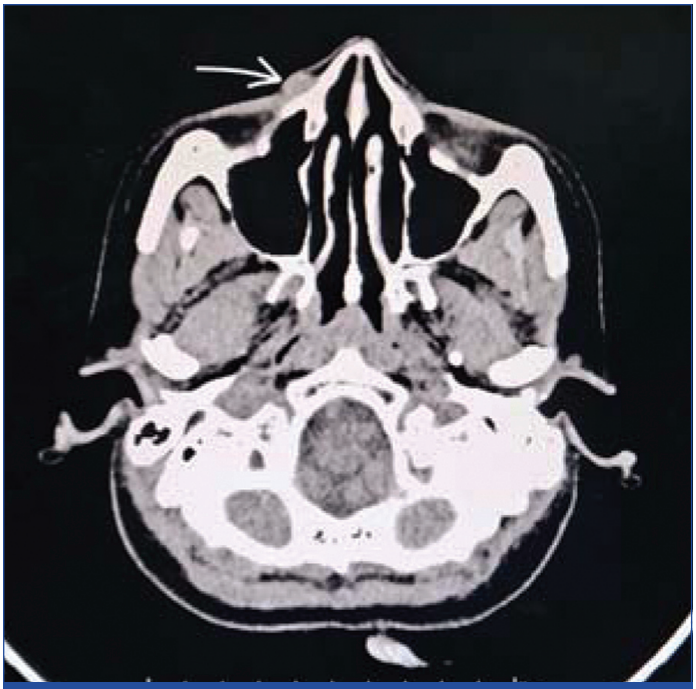
[Table/Fig-1]: Preop image of swelling over right medial canthus.

Computed Tomography (CT) scan of the facial bone revealed a well-defined heterogenous soft-tissue/fluid density lesion in subcutaneous plane below right inner canthus suggestive of internal angular dermoid [Table/Fig-2,3].

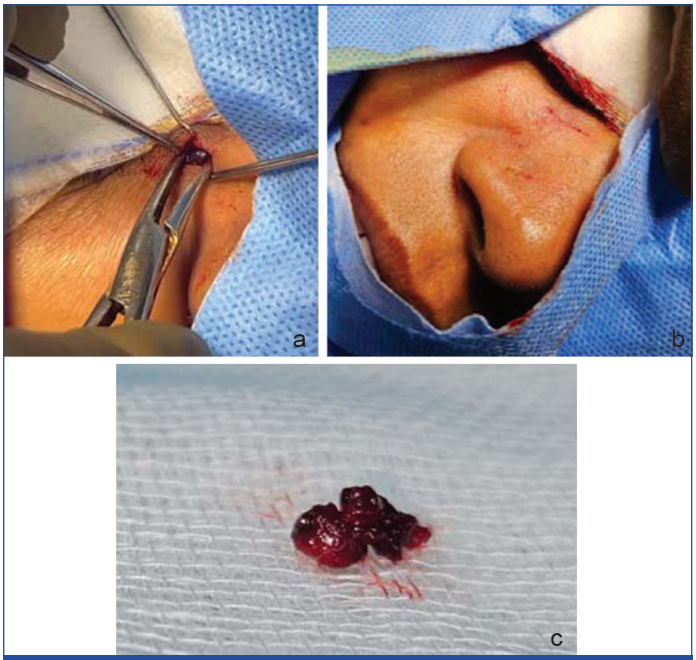
The patient underwent surgical excision under local anaesthesia. Intraoperatively, the lesion appeared soft, well-circumscribed, and was not adherent to surrounding structures. Gross examination revealed a small, encapsulated mass [Table/Fig-4a-c]. Histopathological analysis showed a proliferation of capillary-sized



[Table/Fig-2]: CT Scan image - Coronal View shows soft-tissue density over right medial canthal region with no findings of bony erosion.

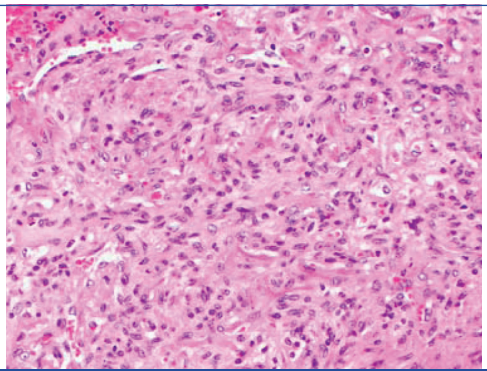


[Table/Fig-3]: CT scan image - Axial View shows soft-tissue density in the right medial canthus region.



[Table/Fig-4]: a) Intraop image during excision; b) Post excision of mass; c) Gross specimen.

blood vessels lined by flattened endothelial cells within a fibrous stroma, consistent with a capillary haemangioma [Table/Fig-5]. The patient had an uneventful postoperative recovery, with no evidence of recurrence at the 3-month follow-up.



[Table/Fig-5]: Proliferation of blood vessels within fibrous stroma (Haematoxylin and Eosin staining with 10x low power microscope).

DISCUSSION

Haemangiomas are benign vascular neoplasms characterised by abnormal proliferation of blood vessels [1]. Commonly diagnosed in infancy, haemangiomas occur in approximately 4-5% of neonates, with a significant proportion regressing spontaneously over time [2]. Evidence from published studies also supports this rarity. Bejjanki KM et al., (2019) identified only 16 cases of periocular lobular capillary haemangiomas in adults, with a median age of 38 years [3]. Kaustubh DA et al., in 2024 further noted that, although infantile capillary haemangiomas may affect up to 5% of infants, the acquired variant in adults is considered “very uncommon” [4]. Vijayanand S et al., (2017) also emphasised this scarcity, reporting that only eight adult cases had been documented in the literature at the time of their study [5]. These findings collectively highlight the unusual nature of adult periocular haemangiomas and underline the importance of recognising them as a rare but relevant differential diagnosis in periorbital swellings.

The pathogenesis of capillary haemangiomas in adults remains unclear and differs significantly from infantile forms. While infantile haemangiomas result from clonal proliferation of endothelial cells stimulated by angiogenic factors such as vascular endothelial growth factor and Basic fibroblast growth factor, adult lesions are believed to arise due to localised vascular malformations or reactive proliferation secondary to trauma, hormonal changes, or chronic inflammation [6]. This distinction explains their absence of a proliferative phase and lack of spontaneous regression, highlighting the importance of treating them as a distinct clinical entity.

Due to the typical location of dermoid cysts in the periorbital area, a haemangioma in this region can easily be misdiagnosed. Multiple studies provide concrete evidence of this diagnostic challenge. Al-muhaylib A et al., 2017 found that out of 97 clinically diagnosed dermoid cysts, 5 were actually misdiagnosed, with 4 being vascular lesions like haemangiomas [7]. Hsu J et al., 2012 reported specific cases where haemangiomas were initially diagnosed as dermoid cysts or dacrocystoceles [8]. A detailed case study by Wadhwani M et al., 2021 illustrated that a 1-year-old patient was initially diagnosed with a dermoid cyst based on imaging, but surgical excision and histopathology revealed a haemangioma [9]. The similarity in characteristics, such as a mobile, painless mass in the periorbital region, contributes to this diagnostic confusion. The medial canthal region can present with a broad range of benign and malignant lesions, making clinical differentiation challenging. Common differential diagnoses include dermoid cysts, epidermoid cysts, dacryocystoceles, lipomas, lymphangiomas, lacrimal sac tumours, and granulomatous conditions. Each of these lesions may manifest as a painless, slow-growing, and well-circumscribed swelling.

Unlike infantile haemangiomas, adult capillary haemangiomas do not exhibit spontaneous involution and may remain asymptomatic for years. Adult capillary haemangiomas differ markedly from infantile haemangiomas in their biological behaviour, particularly in their lack of spontaneous involution. Yılmaz S et al., (2014) reported that intramuscular capillary-type haemangiomas typically present beyond infancy with nonspecific symptoms and show no evidence of natural regression; in their series, follow-up MRI demonstrated proportional enlargement, slow growth, or stability, but never involution [10]. In contrast, Boscolo E et al., (2009) described the characteristic pattern of infantile haemangiomas, which undergo a rapid proliferative phase followed by spontaneous involution beginning around one year of age and continuing for several years [11]. This clear distinction in growth dynamics underscores the need to consider adult capillary haemangiomas as a separate clinical entity with different diagnostic and management implications.

Superficial lesions may not require preoperative imaging and are often managed surgically based on clinical judgement; however, imaging becomes valuable when lesions are deeper, atypical, or

diagnostically uncertain. Ultrasonography or Magnetic Resonance Imaging (MRI) is particularly useful for lesions that are deep-seated, atypical, or diagnostically uncertain. In the present case, the lesion was clinically superficial, and surgical excision was both diagnostic and therapeutic. Misdiagnosis is a recognised challenge, particularly in the periorbital region where haemangiomas frequently mimic dermoid cysts. Wadhwani M et al., in 2021 described a case in which a haemangioma was initially interpreted as a dermoid cyst on imaging [9]. In this context, imaging modalities play an important role in refining the differential diagnosis. Inarejos Clemente EJ et al., (2023) noted that, while clinical features often guide diagnosis, ultrasound and MRI are preferred when imaging is required [12]. Gates-Tanzer L et al., (2024) further emphasised that preoperative imaging for superficial lesions should be judicious, considering the need to avoid unnecessary radiation exposure and additional healthcare costs [13].

Definitive diagnosis of periocular tumours relies on histopathological examination because of the considerable clinical and radiographic overlap among different lesion types. Hsu J et al., (2012) documented cases in which lesions initially diagnosed as dermoid cysts or dacryocystoceles were confirmed as haemangiomas only after biopsy [8]. Similarly, Al-muhaylib A et al., (2017) reported that, among 97 cases clinically suspected to be dermoid cysts, five were ultimately identified as vascular lesions or other tumours upon histopathology [7]. Jung WS et al., (2007) also emphasised that imaging alone often cannot reliably differentiate these lesions, reinforcing the need for pathological confirmation [14]. Across these studies, diagnostic accuracy improved significantly only with histopathological evaluation, underscoring its essential role in establishing the final diagnosis. Awareness of such rare presentations is essential for accurate diagnosis and appropriate management.

The present case adds to the scarce literature describing adult-onset medial canthal capillary haemangiomas, as most previously reported adult cases have involved the eyelid or conjunctiva rather than the canthal region. These findings concur with those of Bejjanki KM et al., (2019) and Wadhwani M et al., (2021), who reported similar diagnostic confusion between vascular and cystic lesions in the periocular area [3,9]. Such documentation enhances awareness of this atypical presentation and supports the inclusion of vascular lesions in the differential diagnosis of long-standing, asymptomatic periorbital swellings that clinically resemble dermoid cysts.

Adult-onset vascular tumours of the periorbital region, though rare, warrant a high index of suspicion, especially in cases of slow-growing swellings in uncommon anatomical sites. Early histopathological confirmation through biopsy remains essential to avoid diagnostic errors and guide appropriate management. However, there remains a paucity of long-term follow-up data on adult-onset capillary haemangiomas, particularly in medial canthal locations. Future multicentric documentation and longitudinal studies could help establish clearer diagnostic criteria and evidence-based management protocols for these rare vascular tumours.

CONCLUSION(S)

Adult-onset medial canthal haemangiomas are rare and can clinically resemble dermoid cysts due to shared anatomical localisation and benign presentation. Careful clinical evaluation supported by histopathology is essential for accurate diagnosis. This case reinforces the need to include vascular tumours in the differential diagnosis of long-standing, asymptomatic periorbital swellings in adults and contributes to the limited literature on such atypical presentations.

REFERENCES

[1] Mabeta P, Pepper MS. Haemangiomas - current therapeutic strategies. Int J Dev Biol. 2011;55(4-5):431-37. Doi: 10.1387/ijdb.103221pm. PMID: 21858768.
[2] Obler L, Hogeling M. Infantile haemangioma: A brief review of clinical manifestations, associations and treatment. J Dermatolog Clin Res. 2016;4(3):1076.
[3] Bejjanki KM, Mishra DK, Kaliki S. Periocular lobular capillary haemangioma in adults: A clinicopathological study. Middle East Afr J Ophthalmol. 2019;26(3):138-40.
[4] Kaustubh DA, Amin H, Pai V. A rare case of Acquired capillary hemagioma of medial canthus of right eye. IJSR. 2024;13(12):01-02.
[5] Vijayanand S, Ranganatha N, Singh M, Babu R. Unusual case of acquired capillary haemangioma of the eyelid in an adult. Ann Maxillofac Surg. 2017;7(2):308-11.
[6] Greenberger S, Bischoff J. Pathogenesis of infantile haemangioma. Br J Dermatol. 2013;169(1):12-19.
[7] Al-Muhaylib A, Alkatan HM, Al-Faky YH, Alsuhaibani AH. Periorbital lesions misdiagnosed as dermoid cysts. J AAPOS. 2017;21(6):509-11.
[8] Hsu J, Mohney BG. Infantile haemangiomas masquerading as other periocular disorders. Case Rep Pediatr. 2012;2012:290645.
[9] Wadhwani M, Kursange S, Mahajan N. Capillary haemangioma masquerading as a dermoid cyst. Kerala J Ophthalmol. 2021;33(3):331.
[10] Yilmaz S, Kozakewich HP, Alomari AI, Fishman SJ, Mulliken JB, Chaudry G. Intramuscular capillary-type haemangioma: Radiologic-pathologic correlation. Pediatr Radiol. 2014;44(5):558-65.
[11] Boscolo E, Bischoff J. Vasculogenesis in infantile haemangioma. Angiogenesis. 2009;12(2):197-207.
[12] Inarejos Clemente EJ, Diaz Leyva J, Karakas SP, Duarte AM, Mas TR, Restrepo R. Radiologic and clinical features of infantile haemangioma: Potential pitfalls and differential diagnosis. Radiographics. 2023;43(11):e230064.
[13] Gates-Tanzer L, Pazelli AM, Wang L, Cofer S, Davis DMR, Lehman J, et al. Imaging yield, surgical findings, and outcomes following surgical excision of lateral brow dermoid cysts. J Craniofac Surg. 2025;36(2):465-68.
[14] Jung WS, Ahn KJ, Park MR, Kim JY, Choi JJ, Kim BS, et al. The radiological spectrum of orbital pathologies that involve the lacrimal gland and the lacrimal fossa. Korean J Radiol. 2007;8(4):336-42.

PARTICULARS OF CONTRIBUTORS:
1. Senior Resident, Department of ENT, Sree Balaji Medical College and Hospital, Chennai, Tamil Nadu, India.
2. Professor and Head, Department of ENT, Sree Balaji Medical College and Hospital, Chennai, Tamil Nadu, India.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:
G Karthika,
Sree Balaji Medical College and Hospital, CLC Worls Road, Chromepet, Chennai, Tamil Nadu, India.
E-mail: karthig1994@gmail.com

PLAGIARISM CHECKING METHODS: [Jain H et al.]
- Plagiarism X-checker: Nov 10, 2025
- Manual Googling: Jan 01, 2026
- iThenticate Software: Jan 03, 2026 (4%)

ETYMOLOGY: Author Origin

EMENDATIONS: 6

AUTHOR DECLARATION:
- Financial or Other Competing Interests: None
- Was informed consent obtained from the subjects involved in the study? Yes
- For any images presented appropriate consent has been obtained from the subjects. Yes

Date of Submission: **Nov 08, 2025**
Date of Peer Review: **Nov 28, 2025**
Date of Acceptance: **Jan 05, 2026**
Date of Publishing: **Apr 01, 2026**