A Young Boy with Orbital Angioleiomyoma: A Rare Case Report

Abstract: A 17-year old boy presented in oculoplastic department with complaints of painless swelling in lower lid for 1 year. Examination revealed a firm and mobile mass located infero-lateral aspect of left orbit with normal extraocular movements. The visual acuity, slit lamp bio-microscopic and fundus examination were within normal limit. The Computed tomography in axial and coronal sections showed soft tissue shadow homogenously enhancing with contrast. The tumor was completely excised with swinging eyelid approach and histopathologic examination confirmed the diagnosis of angioleiomyoma. Herein, we present a case of rare orbital angioleiomyoma located inferolaterally and complete surgical excision with swinging eyelid approach.

Keywords: Angioleiomyoma, Spindle shaped cells, Swinging eyelid.

INTRODUCTION

Angioleiomyoma also known as angiomyoma, vascular leiomyoma or dermal angioma is benign solitary smooth muscle tumor that occurs anywhere in the body (Fletcher CD, 2002). They usually develop in middle-aged women as small, firm, mobile nodules in the subcutaneous tissue or dermis of the lower extremity (Bajpai M et al., 2016). However, orbital angioleiomyoma are extremely rare capsulopalpebral muscle of Hessar and Muller muscle may be its origin (Betharia SM et al., 1991, Jakobiec FA et al., 1973 and Jakobiec FA et al., 1975). Herein, we report a case of anterior orbital angioleiomyoma located in inferolaterally.

CASE REPORT

A 17-year boy presented in our OPD with chief complaints of swelling left lower lid for 1 year. His visual acuity was 6/6 in both eyes in Snellen chart. Intraocular pressure was 14 mm of HG bilaterally. Examination revealed mass located in inferiorly and pushing globe slightly upward (Fig.1). On palpation, a firm, mobile mass of approximately 20mm x12mm was detected inferiorly. Hertel’s Exophthalmometry readings detected no proptosis. The extraocular motilities in all directions of gaze were normal. The slit lamp biomicroscopic and dilated fundus examinations were normal in his both eyes.
Fig. 1: External clinical photograph shows mass located inferior aspect of left orbit.

The Computerized Tomography of orbit revealed approximately 2.1 x 1.3 x 1.1 cm size oval iso to hypodense soft tissue density lesion (average +41 HU) in inferolateral aspect of left orbital cavity which homogeneously enhance with contrast (average +197) [Fig.2 (a), (b) and (c)]. The extraconal tumor is slightly displacing left globe upward. Few prominent vessels were seen within orbital cavity adjacent to the lesion. There was minimal smooth scalloping at adjacent orbital bone.

Fig. 2 (a) Axial CT image showing iso to hypodense soft tissue density lesion in inferolateral aspect of left orbit. (b) CECT axial image showing homogenous enhancement (c) CECT coronal image showing enhancement

In the light of these findings, our preliminary diagnosis was any vascular tumor. An excisional biopsy was performed via swinging eyelid approach which is extended transconjunctival approach with canthotomy and cantholysis [Fig. 3(a)]. An incision about 2.5 cm in length was given in inferior conjunctival fornix parallel to the lower edge of tarsal plate and dissection extended to the inferior orbital rim through retro septal plane. The periosteum was incised and elevated and malleable retractor was used to expose the surgical field. The well encapsulated mass was easily dissected from the surrounding tissue by blunt dissection and removed completely followed by lateral canthal reconstruction [Fig. 3(b) and (c)]. Excised tumour was lobular with gray brown colored, and it was sent for histopathological examination.

Fig. 3 (a) Swinging eyelid approach. (b) Tumor removed. (c) Canthopexy and skin closure
The histopathological examination revealed discrete tumor composed of bundles and fascicles of uniform spindle shaped cells with eosinophilic cytoplasm and cigar shaped nuclei with blunted ends. Thin walled vascular channel lined by bland endothelial cells are found in between. There were no mitotic figures, nuclear pleomorphism and nuclear atypia [Fig. 4(a) and (b)].

![Fig.4](4a) Bundles and fascicles of spindle shaped cells with thin walled blood vessels in between (H and E, x10), (b) spindle shaped cells with eosinophilic cytoplasm and cigar shaped nuclei (H and E, x40)

Based on clinical and histopathological findings, our diagnosis was orbital angioleiomyoma. There was no any post-operative complication and recurrence after 6 months of surgery. The lateral canthal shape was preserved with no visible scar.

**DISCUSSION**

Intraorbital angioleiomyoma is rare tumor and like intracranial angioleiomyoma exhibits male: female predominance of 4:1 (Li D et al., 2014). The tissue of origin of angioleiomyoma is considered to be smooth muscle of blood vessels, pericytes, Müller's muscle or the capsulopalpebral muscle of Hessar (Korn BS et al., 2007). Angioleiomyoma has been subdivided into three types – solid, venous, and cavernous (Jakobiec FA et al., 2012). We found no dilated cavernous spaces within tumor, so we consider our case to be a solid variant. Morimoto observed that solid variants are often painful and seen in the extremities however, our case being solid variant was painless (Morimoto N, 1974 and Campos R, 1946). In the present case we couldn’t identify the origin of tumor as there was no attachment to any external ocular muscles.

Radiologically, these tumors are circumscribing rounded or irregular shaped soft mass with isotropic density with CT value 45 to 50 (Lin J et al., 2015). The tumors should be distinguished with similar imaging appearance including cavernous hemangioma, schwannomas, and neurofibromas as well as other well-circumscribed masses. Complete removal is the treatment of choice for orbital angioleiomyoma. However, close follow up examinations is required for incompletely removed tumor since it may re-grow. We chose swinging eyelid approach for better exposure of surgical field with safety and better cosmetic outcomes.

**CONCLUSION**

In conclusion, despite being rare tumor, orbital angioleiomyoma should be considered in differential diagnosis of well circumscribed orbital mass since it requires complete excision. The swinging eyelid approach provides sufficient exposure of surgical field with safety and better cosmetic outcomes.

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**Conflicts of Interest:** None

**Consent:** Informed written consent from Patient was obtained.

**REFERENCES**


