

## CASE REPORT

### A rare case of Cavernous Hemangioma in Lateral Rectus Muscle

Dr. Nitin Trivedi, Dr. Stuti Trivedi

Avataran Hospital, Vastrapur, Ahmedabad-380054

**KEY WORDS :** Cavernous hemangioma, Intramuscular cavernous hemangioma

#### ABSTRACT

Cavernous hemangioma is the commonest benign tumour of orbit. It is slow-growing and mostly asymptomatic. Its presence in muscle tissue is very uncommon. A case of 23 year old woman presented with a cavernous hemangioma in lateral rectus muscle in orbit. It was treated by surgical excision by Lateral orbitotomy.

#### INTRODUCTION

A 23 year old woman presented with discomfort in right since 6 months. There was mild blurring of vision and occasional dull aching pain in RE. There was no other complain. On examination there was mild lateral displacement of RT eyeball with full ocular movements. Cover test was normal. Visual acuity was 6/6 in both eyes without glasses. There was no proptosis or diplopia. Rest of anterior segment on both sides were normal including normal pupillary reflexes. Fundus examination did not reveal any abnormality. {fig. 1}

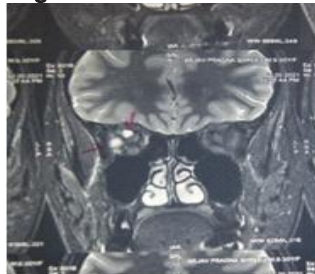
**Fig. 1 Pre operative RE Out word Displacement**



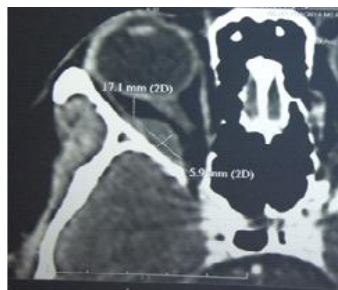
Patient had a past history of examination and management with MRI done. It was diagnosed as orbital pseudotumor by the radiologist. It was treated with systemic corticosteroids for 1 month. Treatment had not given any results. {fig. 2}

We advised to have a CT scan of orbit {fig. 3} with contrast enhancement. It showed thickened belly of lateral rectus muscle of RT orbit with vascular mass inside. We decided to perform lateral orbitotomy. Intraoperatively we explored area near lateral muscle and found a tuft of vessels. During procedure there was leakage of dark red colour fluid suggestive of old

**Fig.2 MRI RT orbital Mass**



**Fig 3. CT scan RT Orbit Thickened LR muscle**



haemorrhage. Gentle dissection was carried out to separate the bundle of blood vessels. The bundle was sent for histopathological examination with H& E stain. HP report suggested cavernous hemangioma with striated muscle fibres surrounding it. {fig. 4}

#### DISCUSSION

Cavernous hemangiomas usually are solitary and most often occur in the lateral aspect of the retrobulbar intraconal space. Hemangiomas are benign, non-metastasizing tumors composed of hamartomatous proliferation of blood vessels, most commonly found in cutaneous and mucosal surfaces of infants and children. Those affecting skeletal muscles, also known as intramuscular hemangiomas (IMHs), are rare and represent <1% of all hemangiomas. They have a predilection for muscles of the trunk and extremities, head

**Correspondence :** Dr. Nitin Trivedi

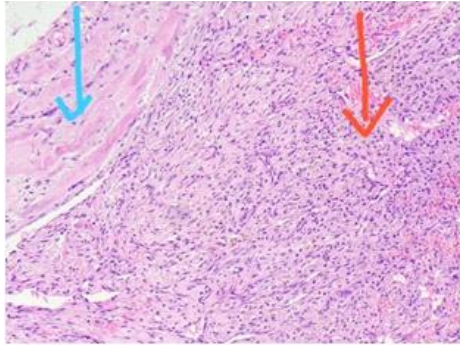
**Address**

49-A, Lad Society, Sandesh Press Road, Vastrapur,  
Ahmedabad-380054 • E-mail : trivedinitinv54@gmail.com

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**Fig 4. HP Image Blue Arrow-Striated Muscle  
Red Arrow –Cavernous spaces**



and neck region being involved only in about 14% of the cases IMHs affecting the extraocular muscles (EOMs) are extremely rare<sup>[3]</sup> They are rarely intramuscular. They uncommonly involve the orbital apex, but when they do, they may cause monocular vision loss due to the compression of blood vessels that supply the optic nerve. Intramuscular hemangioma (IMH) is an uncommon type of tumor, accounting for less than 1% of the total number of hemangioma tumors diagnosed.<sup>[1]</sup> IMHs are non-metastasizing, benign hamartomatous congenital neoplasms that, after remaining unremarkable for long periods, may suddenly start to grow in the second and third decades of life. Kiratli et al. reported two cases of isolated IMH of extraocular muscles: one in a 3-year-old child with involvement of lateral rectus muscle and the other in a 40-year-old man with involvement of the medial rectus muscle. Both of them presented with proptosis and lid swelling. On histopathological examination, the child was diagnosed to have capillary type IMH and the adult man was diagnosed to have mixed type IMH.<sup>[2-4]</sup> A 31-year-old pregnant woman presented with subacute painful proptosis due to an orbital apex mass arising from the right medial rectus muscle.<sup>[5]</sup>

On CT images, cavernous malformations typically are well circumscribed, round or ovoid, homogeneously hyper-attenuating, intraconal lesions. They occasionally contain microcalcifications (phleboliths) and may produce expansion of the orbital walls. The lesions may displace adjacent structures but do not invade them. At multiphase dynamic contrast material-enhanced CT, poor enhancement is noted in the early arterial phase because of the low-flow arterial supply; contrast material does not fill the central part of the lesion until the late venous phase<sup>[6]</sup>

A young 25 year lady presented with complains of Right eye pain, dimness of vision for 6 months there was mild discomfort in right eye. On examination, right eye was minimally pushed out. Visual acuity was Right eye 6/6 without glasses and left eye also had 6/6 vision without

glasses. Anterior segment both eyes were normal .Ocular movements were full without complain of reported to occur in the head and neck musculature (e.g. masseter, trapezius, sternocleidomastoid, mylohyoid, temporalis muscles) Intramuscular angioma (the preferred term for lesions formerly known as intramuscular hemangiomas by WHO Tumors of Soft Tissue and Bone Classification, 5th edition 2020) (IA) occurring in the extraocular muscles or palpebral muscles (orbicularis oculi) are extremely rare with only a few case reports in the English literature. To date, all the extraocular muscles have reportedly been involved. With the case reported herein, the medial rectus muscle appears to be the most common extraocular muscle involved. rare tumors.<sup>[1]</sup>

The lesions are usually managed conservatively, and surgical excision is reserved for those that cause severe proptosis or optic nerve compression. Because of the inaccessibility of the small feeding arteries and the multiple collateral pathways available for recanalization, embolization therapy is not often performed.<sup>[2-3]</sup>

## CONCLUSION

Cavernous hemangiomas are of the commonest orbital tumours present in intramuscular surgical space. But its presence in the intra-skeletal muscle is quite rare. Due to its rarity and its radiological appearance as a thickened EOM can be confuse and misdiagnosed as conditions like myositis, lymphoma, muscle tumor. Its treatment is careful surgical excision .Imaging techniques like MRI can be misleading and CT can be a substantiating modality for diagnosis.

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