

# Diagnosis and Management of a case of Cavernous Haemangioma – A Case Report



## Medical Science

**KEYWORDS :** haemangioma, axial proptosis, lateral orbitotomy,

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### ABSTRACT

*Cavernous haemangioma is a vascular lesion and most common benign orbital tumour in adult patients. We report a case of cavernous haemangioma and its management.*

#### Introduction

Cavernous haemangioma is one of the most frequent orbital tumors of adults. It is the most common orbital vascular lesion, followed by capillary hemangiomas, lymphangiomas and hemangiopericytomas. Cavernous angiomas of the orbit are benign vascular tumors usually causing a slowly progressive proptosis from their mass effect. These lesions have behavioral and radiological findings different from those of brain, probably due to their particular origin and structure. We report a case of patient with pathologically proved cavernous hemangiomas of the orbit. Main clinical, pathological and especially the specific MRI aspects is discussed.

#### Case Report

A 45 year old female patient residing at modasa,Gujarat presented with the chief complain of protrusion of right eyeball since 4 years. Protrusion was chronic, progressive, painless in nature. There was no history of fever, weight loss, intolerance to heat, fatigability. There was no history of diminished in vision, diplopia, trauma, and postural variation.

On examination patient was conscious and oriented with vitals stable. Rest of general examination was normal. BCVA was 6/9 in both the eyes with normal IOP. Head postue was normal with facial asymmetry. Proptosis was unilateral,Axial,Non tender, Non pulsatile. Mass was non palpable,absent of pulsation or thrill. globe is non reducible. No change in the size of mass with change in posture or valsalva maneuver.

On Inspection Nafziger sign (Figure A) and warm's eye (Figure B) view was positive with absent of lid retraction, lid lag and lagophthalmos. Hurtle's exophthalmometry was 21mm in RE and 14mm in LE. Cover test was normal with normal ocular movements.



Figure A



Figure B



Figure C

- On Palpation, orbital margins are intact. Insinuation was possible in all margins. Mass was not palpable and proptosis was non reducible and non compressible with absent of any bruit or thrills.
- Fundus examination (Figure D) revealed normal disc and macula with presence of choroidal folds temporal to disc suggestive of compression of globe from mass.
- Ultrasonography (Figure E) revealed moderate density echogenic mass lesion behind the globe with internal reflectivity.
- On MRI (Figure F & G)- A retro orbital mass which was isointense to muscle on T1 and hyperintense on T2 with inhomogenous enhancement.



Figure D

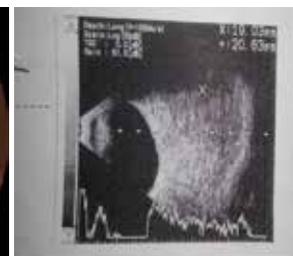


Figure E



Figure F

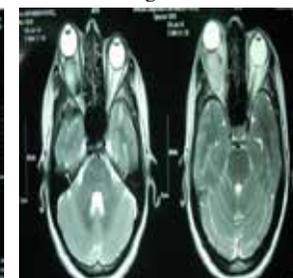


Figure G

Patient was treated surgically. Mass excised via lateral orbitotomy and sent for histopathological examination which revealed large endothelium lined thin walled sinusoidal spaces separated by irregular fibrous connective tissue septa suggestive of cavernous haemangioma.



#### 1<sup>st</sup> Post operative Day

#### Discussion

Cavernous haemangioma is a rare vascular malformations and most common benign adult tumour involving orbit, considered to be congenital blood vessel hamartomas. The growth of cavernous haemangiomas is exceedingly slow, and in some cases, may not grow at all after a certain age. This allows the orbit and globe to accommodate to the mass without producing symptoms. They are growing by proliferation of new capillaries in the walls of the cavernous spaces, becoming then cavernous spaces through a progressive ectasia. Cavernous hemangioma may accelerate in pregnancy. This, coupled with female preponderance, suggests that the growth may be hormonally influenced.

Orbital cavernous angiomas are mostly located in the intraconal space. Clinically, the most common finding is a painless, progressive, non pulsatile proptosis. On CT and MRI, orbital cavernous angiomas usually present as homogeneous round or ovoid, well-circumscribed masses.

It should be excised surgically as mass effect of the cavernous angiomas may cause several disturbances such as: hyperopia from the posterior compression of ocular globe, visual field defect from the compression of the optic nerve, or its blood supply. Removal of cavernous angiomas can be performed through several surgical approaches, depending on their location in the orbit. The lateral approach (zygomaticofrontal orbitotomy) is generally indicated for intraconal cavernomas, whereas the anterior approach is indicated for extraconal lesions



#### REFERENCE

- [1]ACCIARI N, GIULONI M, PADOVANI R, GAIST G, POZZATI E, ACCIARI R. Orbital cavernous angiomas : surgical experience on a series of 13 cases. *J Neurosurg Sci* 1995 ; 39 : 203-209. | [2]ACCIARI N, PADOVANI R, GIULONI M, GAIST G, ACCIARI R. Intracranial and orbital cavernous angiomas : a review of 74 surgical cases. *Br J Neurosurg* 1993 ; 7 : 529-539. | [3]CASTEL JP, DELORGE- KERDILES C, RIVEL J. Cavernous hemangioma of the optic chiasm. *Neurochirurgie* 1989 ; 35 : 252-256. | [4]DE POTTER P, DOLINSKAS C, SHIELDS CL, SHIELDS JA. Vascular tumors. MRI of eye and orbit. JB Lippincot Company, Philadelphia, 1995 ; pp. 159-161. | [5] DINAKAR I, NAIK RTS, PUROHIT AK, RATNAKAR KS. Cavernous hemangioma of the orbit : a case report. *Indian J Pathol Microbiol* 1993 ; 36 : 318-321. | [6]DUCREY N. Les tumeurs vasculaires de l'orbite. *Klin Mbl Augenheilk* 1995 ; 206 : 391-393. | [7]FERREIRA NP, FERREIRA MP. Optic nerve apoplexy caused by a cavernous angioma. Case report. *Neurosurgery* 1992 ; 30 : 262-264. | [8]FRIES PD, CHAR DH, NORMAN D. MR Imaging of orbital cavernous hemangioma. *J Comput Assist Tomogr* 1987 ; 11 : 418- 421. | [9]GARNER A. Cavernous hemangioma of the orbit : a consideration of its origin and development. *Orbit* 1988 ; 7 : 149- 156. | [10]HARRIS GJ, JAKOBIEC FA. Cavernous hemangioma of the orbit. *J Neurosurg* 1979 ; 51 : 219-228 |