

## Orbital Fat Prolapse : A Rare Case Report

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### Abstract :

*A Subconjunctival orbital fat prolapse, an extremely rare condition, is herniation of intraconal orbital fat due to an acquired weakening of Tenon's capsule by ageing process, trauma or surgery. It is a yellow, soft, mobile mass most frequently located in the supero temporal aspect of the globe. Surgery is considered for irritative symptoms or for cosmetic reasons. Our patient was suffering from foreign body sensation due to the mass and wanted cosmetic correction for the same. After obtaining written informed consent for the surgical procedure patient was taken up for surgery and transconjunctival excision of prolapsed orbital fat was performed under local anaesthesia. The surgical procedure implemented by us caused no complications. Patients was followed up at 1 week, 1 month, 3 months and 6 months and 1 year postoperatively and no recurrence was seen.*

### Background

A Subconjunctival orbital fat prolapse, an extremely rare condition, is herniation of intraconal orbital fat due to an acquired weakening of Tenon's capsule by ageing process, trauma or surgery<sup>1</sup>. It is more common in males, with average onset of 65 years<sup>2</sup>. It is a yellow, soft, mobile mass most frequently located in the supero temporal aspect of the globe that can be indented with a cotton tip applicator. It has convex anterior border and appears larger with pressure on the globe<sup>1</sup>. Surgery is considered for irritative symptoms or for cosmetic reasons. A standard surgical method is the resection of herniated fat through conjunctival incision with or without connective tissue repair<sup>2</sup>.

### Case report

A 64 year old male patient came to Pravara Rural hospital and presented with swelling in the right eye in the supero temporal aspect of the globe since 1 year (Photograph

1). Swelling was painless, non tender, gradually increasing in size over a period of last one year. Patient was having past history of trauma to temporal side of the bony orbit by stone 1 year back. On general examination patient was averagely built and well nourished. Systemic examination for the respiratory system, cardiovascular system, and abdomen revealed no abnormality. Ocular examination revealed that best Corrected Visual acuity of the patient was 6/12 in both eyes. Anterior segment and posterior segment of both the globes was within normal limits. Local examination of right eye revealed a yellowish white mass seen on the temporal aspect of the globe, semilunar in shape, 12mm/7mm/4mm in size. Mass was soft in consistency, avascular, compressible, non pulsatile, showing no signs of inflammation and covered with conjunctiva. The mass did not have a visible posterior limit (Photograph 1). CT imaging showed characteristic finding of a fat compatible radiolucent mass that was continuous with intraconal fat confirming the diagnosis of Orbital Fat Prolapse (Photograph 2). After obtaining written informed consent for the surgical procedure, patient was taken up for surgery and transconjunctival excision of prolapsed orbital fat was performed under local anaesthesia. After

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application of proparacaine 0.5% and povidone iodine 0.3% eyedrops, a speculum was placed between the eyelids. Further anaesthesia was administered with subconjunctival infiltration with 0.2 ml of xylocaine 1% D adrenaline 1:200 000 at the site of the fat prolapse. The conjunctiva and Tenon's capsule overlying the prolapsed fat was opened with Wescott scissors (Photograph 3). The prolapsed orbital fat was gently pulled out through the small conjunctival opening (Photograph 4). The fat was clamped at its base with a Mosquito clamp. The fat was resected over the clamp with scissors. A small stump was left which was cauterized using bipolar cautery. The Mosquito clamp was removed. The conjunctiva and Tenon's capsule were closed in one layer with two fast absorbing sutures (vicryl 6-0) to prevent recurrent herniation by making scar tissue barrier. Patients was followed up at 1 week, 1 month, 3 months and 6 months and 1 year postoperatively and no recurrence was seen (Photograph 5)



Fig. 1 :



Fig. 2 :



Fig. 3 :



Fig. 4 :

### Discussion

A Subconjunctival orbital fat prolapse is a herniation of intraconal orbital fat due to an acquired weakening of Tenon's capsule by ageing process, trauma or surgery<sup>1</sup>. Tenon's capsule normally separates intraconal and extraconal orbital fat from sclera. Surgical or traumatic dehiscence of the capsule more than 10 mm from the limbus may allow forward prolapse of intraconal fat beneath Tenon's capsule<sup>1</sup>. In the elderly, fat prolapse may occur without such an antecedent event and is more frequently located superotemporally<sup>5</sup>. While the differential diagnosis includes conjunctival lymphoma and dermolipoma, the clinical presentation of a subconjunctival fat prolapse is generally sufficiently typical to distinguish it readily from these disorders. The clinical appearance of conjunctival lymphoma is a salmon-coloured patch, which is firm on palpation. In case of uncertainty, CT and D or MRI can be of diagnostic value. The differential diagnosis further includes dermolipoma, which presents as a soft or firm pinkish-

white or pinkish-yellow mass which is less mobile and often has hairs on the surface<sup>6,7</sup>. While a fat prolapse may be reduced back into the orbit using a cotton-tip applicator, this is not possible in case of dermolipoma or lymphoma<sup>8</sup>.

In this case CT imaging showed characteristic finding of a fat compatible radiolucent mass that was continuous with intraconal fat confirming the diagnosis of Orbital Fat Prolapse. Our patient was suffering from foreign bodysensation due to the mass and wanted cosmetic correction for the same. After obtaining written informed consent for the surgical procedure patient was taken up for surgery and transconjunctival excision of prolapsed orbital fat was performed under local anaesthesia.

Several surgical techniques to treat a subconjunctival orbital fat prolapse have been described. The technique we applied was reported by McNab(1999) in five cases with a follow-up of 2 years. Otaka&Kyu (2001) described a technique they used in three patients with this condition. They pushed the herniated fat posteriorly, after which the bulbar conjunctiva was sutured to the sclera at the location of the former fat prolapse. Sato et al. (2006) described a technique they used in four patients. They excised the prolapsing orbital fat, after which they sutured the ligated base of the prolapsed fat to the sclera.

Contrary to such techniques that require putting sutures through the sclera, transconjunctival excision of prolapsed fat holds no chance of scleral perforation.

The surgical procedure implemented by us caused no complications. Retrobulbar bleeding, which might occur when a bleeding stump of excised fat retracts into the orbit, was not observed. Possibly, this risk was limited by excision of the fat over a clamp and meticulous cauterization of the stump.

## Conclusion.

Orbital fat prolapse can be easily diagnosed by clinical clues if one is aware of disease entity.

We suggest that in majority of cases there is no need to order expensive orbital imaging such as CT/MRI scans. Surgical treatment of subconjunctival orbital fat prolapse is recommended if the prolapsed tissue causes irritation or for cosmetic purposes.

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