

## Eye Dystopia in ENT

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### ABSTRACT

Orbital proptosis is a common finding in ethmoidal diseases of the ENT and Head & Neck Surgery but isolated dystopia without the proptosis and decrease in vision is rare finding. Nasal polyps are one such disease which can present in ENT or EYE Department with both ENT and EYE symptoms. External Ethmoidectomy done for advance diseases can still be the best single surgery to save the Eye, Vision, Nasal Function and Facial Symmetry.

**Keywords:** Eye dystopia, orbital proptosis, nasal polyp

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### HISTORY AND CLINICAL EXAMINATION

An eighteen years old male presented in out-patient department with history of increased lacrimation for six months, facial asymmetry for eight months, anosmia for one year, sneezing and rhinorrhea for one and half years and nasal obstruction for two years. On examination the patient had bilateral nasal polyps and muco-pus in the nostrils.

### EYE EXAMINATION

The examination of the eye revealed no proptosis. The Right eye was 18mm and it remained the same after coughing. The Left eye was also exactly the same i.e. 18mm and it remained the same after coughing. The visual acuity was 6/9 in the Right eye however in the Left eye the patient could only Count Fingers up to One Foot. The direct and consensual light reflex was positive in both eyes which meant that reflex afferent pupillary defect was negative. The Inter-Canthal distance was increased to 55mm and so was the Inter-Pupillary distance which was 87mm. The Right eye dystopia was 42mm and the Left was 45mm.

### LABORATORY AND RADIOLOGICAL INVESTIGATIONS

All laboratory investigation such as CBC+ESR, Urine C/E, RFTs, LFTs and Viral Markers were unremarkable. The radiological scans such as B-scans of the eyes which are normally and regularly done by ENT department whenever the Ethmoidal disease is suspected or whenever there is an Ophthalmological involvement in ENT diseases revealed orbital contents are normal but displaced

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laterally, both Orbits show Ethmoidal show. The CT scan of Nose and Para-nasal sinuses Axial and Coronal view with and without contrast revealed extensive soft tissue density mass with hyper dense areas seen in almost all the sinuses. There is thinning and erosion of the underlying bones. The osteo meatal units widened on both sides. The ethmoidal sinuses widened with extension of disease process into left orbital cavity. Lamina papyracea is thinned out. No Intra-Cranial extension seen.

### SURGERY AND RECOVERY

Left External Ethmoidectomy done with Right Intranasal Polypectomy. The recovery was unremarkable. Patient remained vitally and Hemodynamically stable and the Anterior Nasal Packing was removed after 48 hours. The stitches were removed on the 5<sup>th</sup> day. Biopsy report revealed Allergic Nasal Polyps.

### POST-OP EYE EXAMINATION

Post operative Eye examination was done after seventy two hours (three days) which revealed miraculous results. There was no proptosis however the visual acuity had improved remarkably. The vision remained 6/9 in the Right eye but in Left eye there was marked improvement which had also become 6/9. The Inter-Canthal distance became 54mm and Inter-Pupillary distance 82mm. The Right eye dystopia 41mm and the Left also 41mm. Light reflex Direct and Consensual remained positive post-operatively as well. The colour vision was normal. Bilaterally the media (eye ball) remained clear. Bilaterally the disc colour was pink and the margins were well defined. The cup size was 0.2 in both eyes.

	ICD(mm)	IPD(mm)	Dystopia(mm)		Visual acuity	
			Right	Left	Right	Left
Pre-op	55	87	42	45	6/9	CF-1FT
Post-op	54	82	41	41	6/9	6/9

## ANALYSIS

Intranasal polyps and its effects on the eye. The Right eye had near normal vision of 6/9 pre operatively and it remained the same after surgery. However the left eye where the disease was more extensive and the lamina papyracea was thinned out. The bones were more eroded on the left side. The patient was unable to see properly from that side pre-operatively. The vision was Counting Finger from only One Foot it became near normal to 6/9 within 72 hours of surgery which means the main cause of loss of vision was actually the Nasal Polyps and not the Eye pathology. There was not much of difference between the Inter-Canthal distances preoperatively and post operatively. It remained approximately the same and there was no major effect of surgery on it, but it decreased by 1 mm which mathematically might not be significant but medically notable. The Inter-Pupillary distance showed significant change after the operation by decreasing 5mm. The dystopia towards the Left side decreased by 4mm and towards the Right side by 1mm instantly after the surgery. This is a very significant finding.

## CONCLUSION

Eye serves as a major cross road for the Central Nervous System, Nose, Nasopharynx, Para-nasal sinuses and all structures related to the support and functioning of the Globe<sup>1</sup>. The close relationship between the diseases of the Paranasal sinuses and the Orbits are based on their anatomical relationship<sup>2</sup>. The distinction between the Anterior and the Posterior group of sinuses proved to be helpful for the assessment of clinical symptoms. The Anterior sinuses usually cause the outward and downward displacement of the Orbital contents. Mechanical restriction of the Superior Oblique in the trochlear region causes the diplopia. The Posterior group of sinuses is attached to the Orbital apex. Diseases of these group cause proptosis and the various alterations of the cranial nerves II to VI which show the symptoms of Apex Orbitae or Fissura Orbitalis<sup>3</sup>.

This special case although not very frequent but also not absolutely rare got magical results with early intervention by the ENT surgeon. Radical procedure such External Ethmoidectomy still an excellent approach to saving the Eye, Restoring the Vision, the Nasal function and Facial symmetry and the Vital

structures. In extensive disease an aggressive approach must be taken. An Eye was saved and potential blindness averted. With the ENT surgeons moved to the newer techniques such as FESS, the more conventional surgical techniques such the External Ethmoidectomy aka Lynch Howarth procedure is getting obsolete. However in places where FESS is not available especially the hospitals of the third world country this procedure still is the mainstay in the Ethmoidal diseases even today and as reported above gives results which are matchable to the newer techniques<sup>4</sup>. Of course it all depends on the surgical expertise of the one operating. Recurrence rate is very low. The main aim for surgeons remains to save the Eye, Restoring Vision, Nasal Function and Facial Symmetry. Awareness and early involvement of the specialists can avoid such situations and disasters can be prevented. Resolution of disease by surgery that produced the dystopia has taken place and the globe repositioned itself after the disease was removed.

This also opens up the debate of early diagnosis and treatment by doctors and not quacks and sages. This also raises the question for the government that if ultimate cure is by surgery then why money should be spent on the medicinal management. But the most important question for the doctors is dystopia of eye is not a disease of the ophthalmology department only but can present in other departments as well. A thought for the ENT doctors is early surgical intervention in allergic nasal polyps is better in preventing a bigger more complicating disease<sup>5</sup> and criteria should be devised as to what stage of disease that the patient should be managed medicinally or surgically?

## REFERENCE

1. Keche P, Nitnaware A Z et al. A study of tumours giving rise to unilateral proptosis. India n J Otolaryngol Head Neck Surg: 2012, DOI:10.1007/s12070-011-0353-0
2. Jones H M. some orbital complications of nose and thorat conditions. Journal of royal society of medicine: vol 74 june 1981.
3. Bier H, Ganzer U. involvement of the orbit in diseases of the paranasal sinuses. Neurosurg rev.13(1990) 109.
4. Ludman H. paranasal sinuses diseases. British medical journal: vol 282; 28/3/1981: 1054-1057.
5. Raghavan U, Downes R, Jones N S. spontaneous resolution of eye ball displacement caused by maxillary sinusitis. Br J Ophthalmol 2001;85:110.

