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## Editorial

# Proptosis- what Otorhinolaryngologists must know

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Proptosis aka exophthalmos is defined as the anterior displacement of the globe within the bony orbit, beyond the orbital margin.

The orbit is an area of considerable interest to Ophthalmologists as well as Otorhinolaryngologists. True proptosis should be differentiated from pseudoproptosis, which may be seen with a large globe, e.g. in buphthalmos, high myopia etc. or cases with contralateral enophthalmos. The proptosis may occur due to various pathology arising from the orbit itself or adjacent nose and paranasal sinuses. Hence even the patients presenting with only proptosis as chief complaint must be examined by Otorhinolaryngologist.<sup>1</sup>

Many infective and inflammatory lesions of sinonasal origin may involve the orbit, the commonest of which is the orbital complications of acute bacterial sinusitis. Hubert classified orbital complications of sinusitis into the following 5 groups: Inflammatory oedema of the eyelids with or without oedema of orbital contents (Preseptal cellulitis), Subperiosteal abscesses (with Oedema of the lids or spread of pus to the lids), Abscess of orbital tissues, Mild and severe orbital cellulitis with phlebitis of ophthalmic vein, cavernous sinus thrombosis.<sup>2</sup> Of the above, the commonest entity seen clinically is oedema of the eyelids followed by orbital cellulitis.

In chronic cases, the mucocoele i.e. respiratory mucosa lined, mucus containing cystic mass filling the sinus and expanding into the orbit may be present.<sup>3</sup> All paranasal sinuses are capable of developing a mucocoele with the ethmoid and frontal sinus being the commonest ones, in which the globe is pushed inferior and lateral. The expansion is slow over many years involving the orbit but bacterial infection forming pyocoele may lead to sudden expansion

Iatrogenic orbital trauma due to endoscopic sinus procedures is a source of much concern. Maniglia reported on 18 major orbital complications secondary to a range of sinonasal surgeries and the most feared is orbital haematoma leading to blindness.<sup>4</sup>

A variety of benign and malignant conditions arising in adjacent structures such as the skin, paranasal sinuses and skull base may spread to the orbit. The juvenile nasopharyngeal angiofibroma, inverted papilloma and osteoma are among the commonest ones.<sup>5</sup> Malignant growths can arise from the sinuses or the nasopharynx that may secondarily invade the orbit. These growths often present with rapid progression and visual disability.

Most patients with proptosis due to sinonasal pathology have a unilateral eccentric protrusion and the direction can help in the identification of the sinus of origin of the pathology.<sup>1</sup> Among patients with eccentric proptosis, the eye gets shifted downwards and outwards in the majority.

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In patients with acute history of inflammatory pathology like orbital cellulitis secondary to sinusitis, while in patients with chronic protrusion neoplasia arising from the paranasal sinuses is the commonest cause.<sup>5</sup>

Diagnosis of proptosis is confirmed by Hertel's exophthalmometry. Any reading more than 21 mm or a difference between the 2 eyes of more than 2 mm is used as a cut-off value for proptosis. Comprehensive history, detailed local examination, as per the indication biochemical, radiological (Computed Tomography/Magnetic Resonance Imaging) and pathological investigations must be done before planning the treatment in all cases.

All cases with proptosis need to be treated promptly and appropriately often based on clinical suspicion and supported by radiological evidence, to minimize morbidity and visual disability. I also emphasize the fact that proper coordination between the Otorhinolaryngologist and the Ophthalmologist is necessary for the diagnosis and treatment of orbital disorders.

### Conflict of Interest

None.

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