Lateral Rhinotomy for a Large, Infected Haller Cell Causing Proptosis

ABSTRACT

Objective: To report a case of a large sinus Haller cell that presented with chronic rhinosinusitis and proptosis and its surgical management.

Methods:

Design: Case Report
Setting: Tertiary Government Hospital
Patient: One

Results: A 34-year-old lady with proptosis and secondary sinusitis due to a giant infected Haller cell was successfully treated by lateral rhinotomy approach and clearance of all diseased mucosa therein into the nasal cavity.

Conclusion: Approach to diseased sinonasal structures via lateral rhinotomy is an alternative to endoscopic sinus surgery in the presence of an unusually large Haller cell.

Keywords: Haller cell, proptosis, maxillary sinusitis, lateral rhinotomy

'Haller cells' — named after Swedish anatomist Albrecht von Haller are abnormally migrated anterior or posterior ethmoid air cells that may pneumatize the roof of the maxillary sinus. With an incidence reported to vary from 2-45%,1 Haller cells are usually seen in the inferomedial wall or floor of the orbit (i.e. roof of the maxillary sinus) at the level between medial and inferior rectus, adjacent to and above the natural ostium of maxillary sinus. Although a Haller cell is considered a normal anatomical variant, when enlarged it can significantly constrict the posterior aspect of the ethmoidal infundibulum and maxillary ostium from above. If such a cell becomes diseased, the natural ostium of the maxillary sinus may rapidly become obstructed and secondary maxillary sinusitis may develop. A statistically significant increase in maxillary sinus mucosal disease was associated with medium to large Haller cells (45.8%) compared with small cells (28.9%,p<0.05).2

An unusually large Haller cell also hinders the approach to other sinonasal diseased structures during endoscopic sinus surgery. The prevalence of Haller cells on panoramic radiographs is 38.2% but the incidence with which they are seen in a normal population may be less frequent than in individuals with chronic rhinosinusitis.3 Diagnosis of Haller cells is typically made by CT scans as they cannot be identified by diagnostic nasal endoscopy because of their typical location lateral to the infundibulum. Sinoscopic examination of the maxillary antrum can also identify an enlarged or diseased Haller cell. Only diseased Haller cells or large cells blocking the ethmoidal infundibulum need to be addressed surgically and endoscopic resection of such cells remains the...