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Case Report

Thornwaldt Cyst - A Rare Lesion

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ABSTRACT

Nasopharyngeal cyst or Thornwaldt cyst is a rare entry situated at nasopharyngeal wall(posterior). Most common ones are small and does not present with symptoms, but some are large and can cause nasal obstruction, eustachian tube obstruction, post nasal drip and headache. The diagnosis can be made by routine nasal endoscopy in outpatient department, but MRI is the investigation of choice to confirm the diagnosis. For large and symptomatic cyst surgery by Marsupialization is the treatment of choice and small and asymptomatic cyst is usually left for observation. The author here has discussed about the small and symptomatic cyst present in the nasophraynx as it is rare and sometimes diagnosed incidentally while doing routine nasal endoscopy.

KEYWORDS: Marsupialization, Nasopharyngeal Cyst, Nasal Endoscopy.

INTRODUCTION

Thornwaldt Cyst also known as Nasopharyngeal Cyst is the remnant of notochord. It is a relatively rare and benign lesion attached to the posterior wall of nasopharynx above the adenoids[1].

Embryologically, the pharyngeal bursa also called Thornwaldt's Bursa, represents a persistent communication between the roof of nasopharynx and notochord.[2,3,4] The embryonic long axis and development of neural plate is aided by the collection of cells in the midline (notochord). The bones of sphenoid and basioccipit develop in continuity with regression of notochord process at sixth week of gestation. An area is formed when it arise in connection with pharyngeal epithelium.

Obstruction of this diverticulum leads to the formation of Thornwaldt's Cyst[1]. They are usually small and accidentally diagnosed on MRI. Nasal, ear or cervical symptoms may be seen in large sized cyst. Trauma and recurrent nasopharyngeal infection are some of the common etiological factors. Symptomatic patients always requires surgical intervention irrespective of the size of the cyst[5]. It results from the occlusion of pharyngeal bursa[2].

CASE REPORT

A 30 year old male reported to our ENT OPD, PMCH, Udaipur with the chief complaints of pain in neck on left side radiating to left ear and stiffness during neck movements since 10 days. He also had complaints of headache, halitosis, sneezing and purulent post nasal drip. He did not give any history of difficulty in swallowing, or change of voice. There was no history of prevertebral spasm, and epistaxis. He is a known case of hypertension from past 1 year and on regular medication for the same. There was no history of Diabetes mellitus, tuberculosis or drug allergy. Oral cavity and otoscopic examination was normal. Nasal endoscopy (Fig.1) shows:

1.Right inferior turbinate hypertrophy

2.Mucopurulent nasal discharge was present in right middle meatus region.

3.Oedematous swelling of size approximately 7x8mm with smooth surface and pinkish mucosa, well circumscribed which was in round shape with cystic appearance seen in nasopharyngeal region of right side not occluding the eustachian tube.

4.Posterior choana on left side was normal.

There was no neurological deficit. X-ray cervical spine was also advised which came out to be normal. USG Neck was done and found to be normal.CEMRI Brain with PNS and Orbit (Fig.2) shows small peripherally enhancing well defined fluid intensity cystic lesion measuring 9x8mm is seen in superior wall of nasopharynx of right side.

Figure 1: Endoscopic view showing mass in nasopharynx

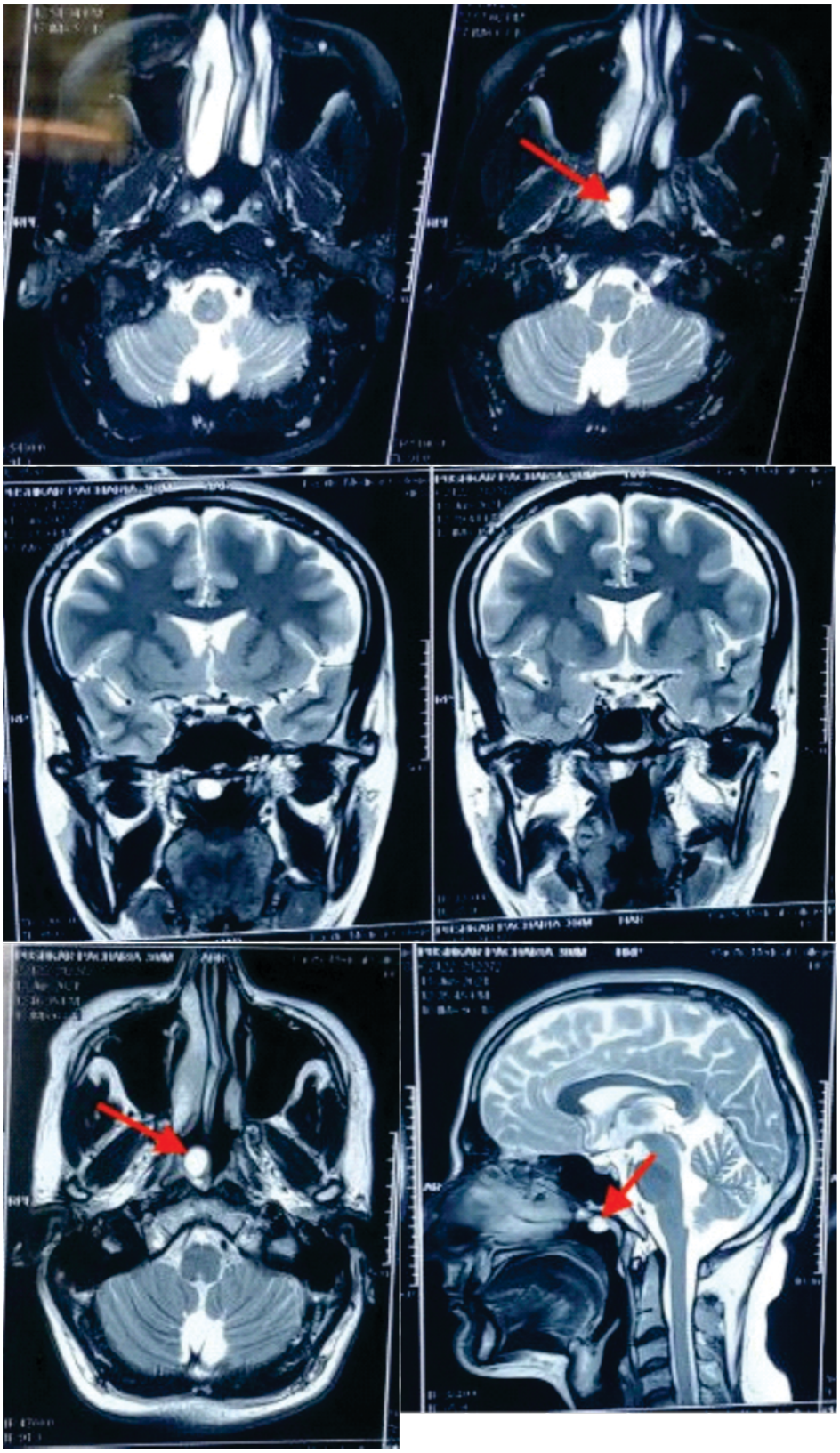

Figure 2: MRI showing mild enhancement mass in nasopharynx region marked with red

Nasopharyngeal cyst probably, Thornwaldt's Cyst was diagnosed. The plan was made to marsupialize the cyst. Though it was small sized cyst but patient was having symptoms. Hence by endoscopic approach marsupialization was done.

DISCUSSION

A Thornwaldt Cyst is a developmental benign cyst[5]. It presents in the midline within the nasopharynx. It represents a persistent communication between the roof of the nasopharynx and the notochord. Its formation is the result of a potential space developing in the nasopharynx at the point where the notochord retains its union with the pharyngeal ectoderm resulting in the out pouching of ectoderm into the pharyngobasilar fascia[5]. The cyst develops when mucoid secretions are produced in the pouch. It can be primary or result of inflammation.

Nasopharyngeal surgical procedures, i.e. adenoidectomy leads to damage to the pharyngeal duct orifice and subsequent infection may be one of the theories for cyst formation[5].

It is found to be present most commonly among the age group of 15 to 30 years with no gender predomination. The patient do not present with any symptom most of the time and no intervention is needed for such patients. If symptoms are present, the most common ones are blockage of nose, halitosis, blockage of eustachian tube and aural fullness. MRI is considered to be the gold standard investigation. The conventional definition of a Thornwaldt cyst is a lesion situated between the longus capitus muscles, that is at least 7 mm or larger in diameter, without associated inflammatory changes in the surrounding soft tissues or concurrent bone involvement.[5] The cyst has a high signal intensity on T1-weighted, T2-weighted and fluid-attenuated inversion-recovery, with no enhancement with gadolinium contrast[6]. Computerized tomography can be used as well, with the TC appearing as a well circumscribed, low density lesion[7]. Differential diagnosis of this cyst is branchial cleft cyst; Rathkes cleft cyst, adenoid retention cyst, meningoceles, encephalocele and meningomyelocele[5]. In patients who present with symptoms operative procedures are done, among which marsupialization or excision are the preferred ones. The use of nasal endoscope provides a clear vision and the chances of relapse of cyst are less likely. Aspiration alone leads to recurrence.

In our case, patient was diagnosed with Thornwaldt cyst of size approx. 9x8mm by the nasal endoscopy in the OPD which was then confirmed with the help of MRI. As the patient was showing symptoms like halitosis, headache, purulent post nasal drip and rhinorhea patient was advised for the surgery. The marsupialization of the cyst was done under GA through 0 degree endoscopic approach. Intraoperative and postoperative period was uneventful. Endonasal endoscopic approach and marsupialization of cyst gives better post result.

CONCLUSION

Though in most of the cases it is an incidental finding, early diagnosis should be made as the increase in size of cyst in future may present with symptoms or aggravate the existing symptoms. Endoscopic approach is performed these days as it gives a better view. Also it helps in complete excision of cyst and chances of recurrence can be reduced.

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CONFLICTS OF INTEREST: None

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