



CASE REPORT

THORNWALD'S CYST -UNUSUAL CAUSE OF BILATERAL SEROUS OTITIS MEDIA

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ABSTRACT

Introduction: Thornwaldt's cyst is defined as "an inconstant blind sac located above the pharyngeal tonsil in the midline of the posterior wall of the nasopharynx. It is usually a developmental abnormality where communication between pharyngeal endoderm and notochordal remnants persist.

Case Report: 32 yr old male, presented with bilateral decreased hearing since 2 and half years, with no other ear symptoms. Audiogram showed bilateral Conductive Hearing loss, with Impedence audiogram showing bilateral type B curve. X ray soft tissue neck lateral view showed soft tissue mass occupying nasopharynx with no crescent sign. CT scan of Paranasal sinuses and nasopharynx was suggestive of midline cystic mass arising from roof of nasopharynx. Patient was taken up for nasal endoscopic surgery. Cyst content was sent for Histopathology reporting which showed respiratory epithelium suggesting Thornwaldt's cyst.

Conclusion: Thornwaldt's cyst is a rare entity. Patients may present with only Bilateral decreased hearing. And if Tympanometry is suggestive of type B curve then the patient should be further evaluated and posted for CT scan of nasopharynx to rule out the diagnosis of Nasal mass. The possibility of Thornwaldt cyst should be kept in mind even though it is a rare entity. The final diagnosis can be confirmed with histopathology report.

INTRODUCTION

Thornwaldt's cyst is defined as "an inconstant blind sac located above the pharyngeal tonsil in the midline of the posterior wall of the nasopharynx; it represents persistence of an embryonic communication between the anterior tip of the notochord and the roof of the pharynx" (Dorland's medical dictionary). It is usually a developmental abnormality where communication between pharyngeal endoderm and notochordal remnants persist. If its opening becomes obstructed, possibly due to infection or a complication from adenoidectomy, a Thornwaldt's cyst might develop (Lin et al., 2006). We have reported a case of 32/m with complaint of B/L decreased hearing and no other ENT complaints. Xray, CT scan and diagnostic nasal endoscopy showed a nasopharyngeal mass. Marsupialisation of mass resulted in restoration of hearing and HPR was suggestive of thornwalds cyst

Case Report

32 yr old male, presented with bilateral decreased hearing since 2 and half years, with no other ear symptoms. There were no nasal complaints, headache, previous nasal surgery or trauma. Pure Tone Audiogram (Figure A) showed bilateral Conductive Hearing loss, with Impedence audiogram (Figure B) showing bilateral type B curve.

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X ray soft tissue neck lateral view (Figure C) showed soft tissue mass occupying nasopharynx with no crescent sign. CT scan of Paranasal sinuses and nasopharynx (Figure D) was suggestive of midline cystic mass arising from roof of nasopharynx. Further on Diagnostic Nasal Endoscopy, there was midline submucosal bulge seen arising from the roof of nasopharynx and abutting Taurus Tubalis (Figure E i). Patient was taken up for nasal endoscopic surgery. The nasopharyngeal mass was marsupialised (Figure E ii & iii). Intraoperative whitish viscous fluid expelled on breaking the cyst wall, marsupialization was done using microdebrider. Cyst content did not show Acid Fast Bacilli and cyst wall sent for Histopathology reporting which showed respiratory epithelium suggesting Thornwaldt's cyst (Figure H). Postoperative Pure tone audiometry showed improved hearing (Figure F) and tympanometry showed regression of fluid (Figure G).

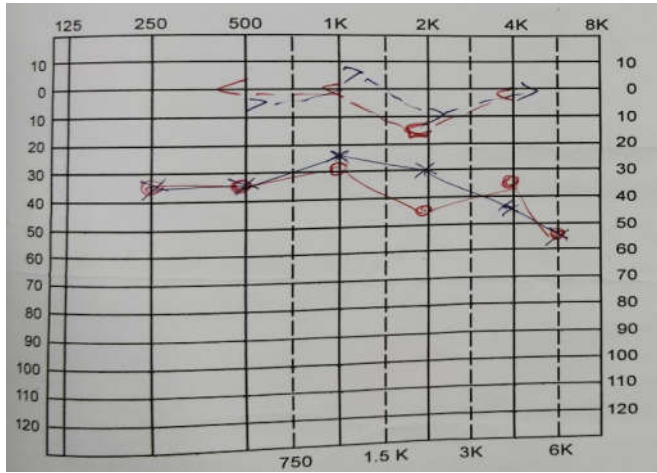
DISCUSSION

The Thornwaldt cyst is a congenital cyst in the region of the pharyngeal bursa, formed by a communication between the notochord and the nasopharyngeal endoderm. It has an incidence of 3% in the adult population. Most cases are diagnosed during the second and third decade. Patients are usually asymptomatic, and they may present symptoms such as nasal obstruction, foreign body sensation, hearing loss, periodic halitosis with an unpleasant taste and nasopharyngeal discharge (Weissman, 1992), (Miyahara and Matsunaga, 194).

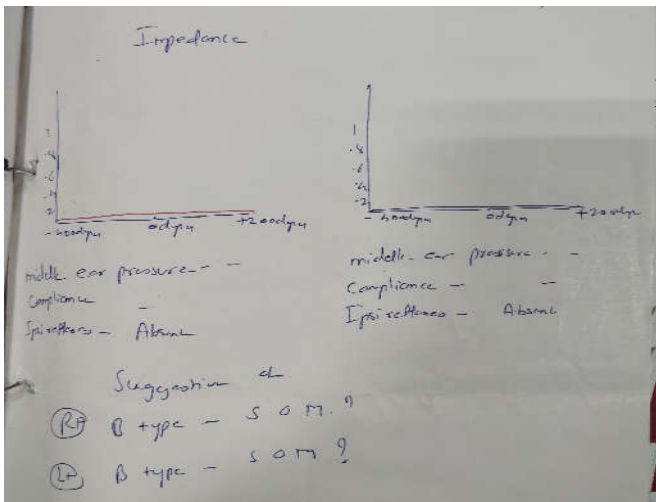
The three most common symptoms are persistent and notable nasal discharge, obstinate occipital headache, and halitosis (Miller and Sneed, 1985). Since it is a benign lesion, asymptomatic cysts do not require treatment.

Figures

Most of them remain asymptomatic and are usually an incidental finding either on endoscopy or CT/MRI scan taken when patient come for some other problems (5).



A) Preoperative Pure tone audiometry showing B/L conductive hearing loss.

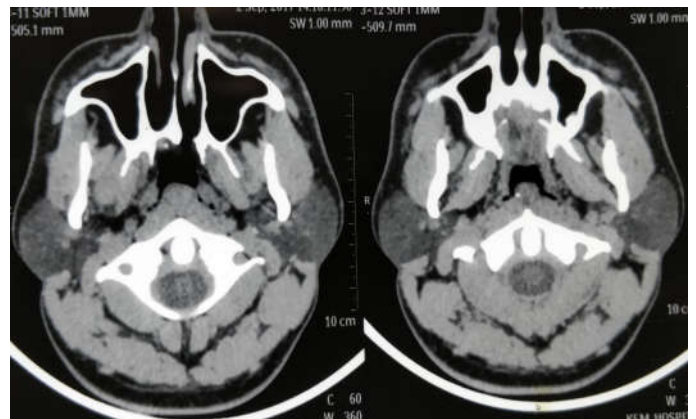


B) Preoperative Impedance audiometry showing B/L type B curve



C) X ray nasopharynx showing soft tissue density in nasopharynx

Symptomatic cases can be operated by endonasal or transoral approach. Generally, transnasal endoscopic marsupialization provides excellent surgical visual field and avoids damage to the orifice of the Eustachian tube. The advantages of an endoscopic approach are also that it.



D) CT scan of paranasal sinuses with nasopharynx showing cystic mass in nasopharynx



i. Cyst abutting torus tubaris



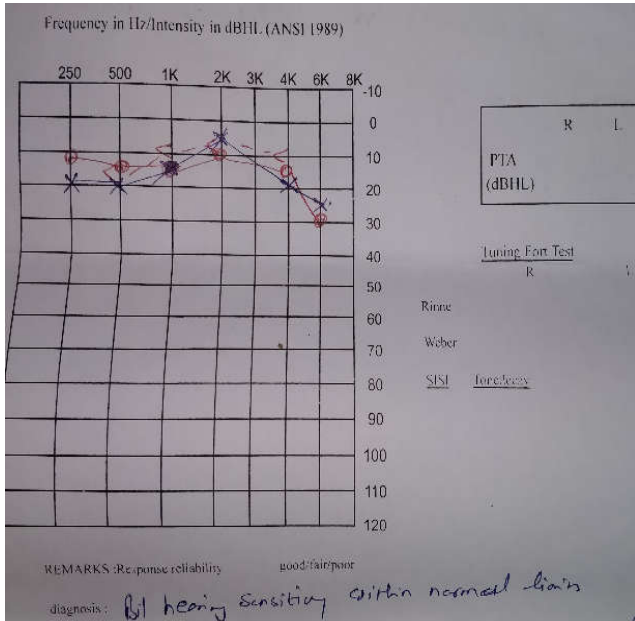
ii. Cyst wall incised



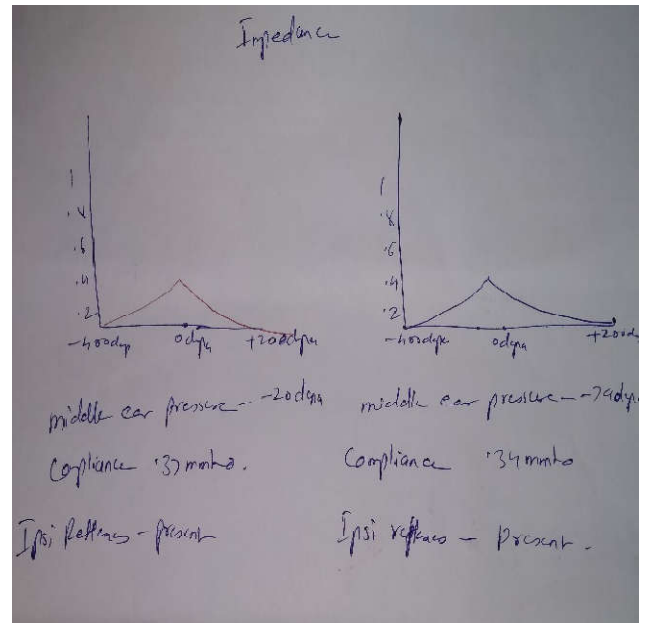
iii. Marsupialisation using microdebrider

E) - Intraoperative findings. Showing Cyst abutting torus tubaris, Cyst wall incised and marsupialisation using microdebrider

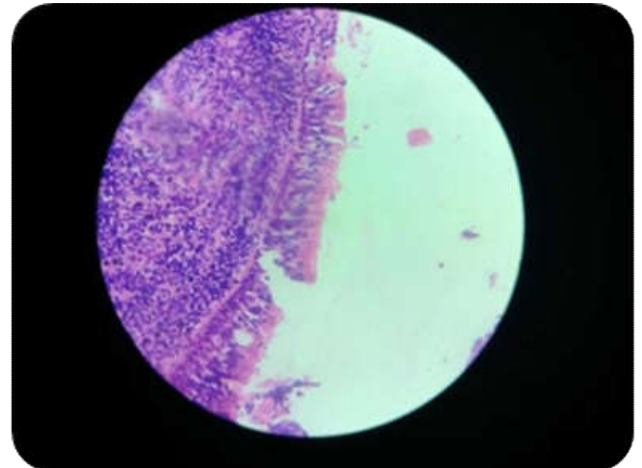
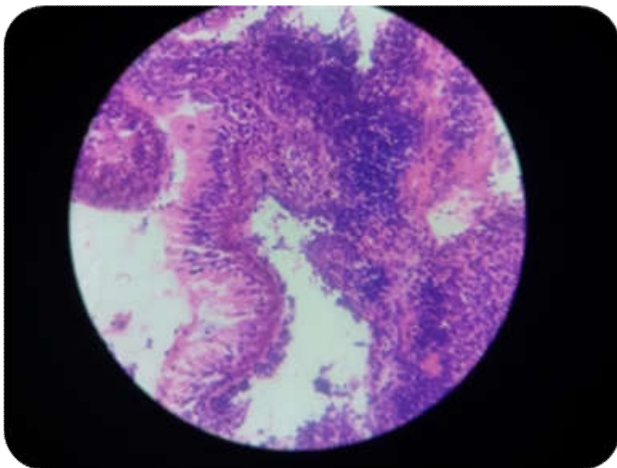
scan Hence He was investigated further and CT scan of Nasopharynx was done. The CT scan showed nasopharyngeal soft tissue with no bone erosion.



F) Postoperative Pure Tone audiometry showing hearing improvement



G) Post op impedance audiometry



The cyst wall was lined by Respiratory epithelium, with the stroma consisting of multiple individual lymphocytes - A typical description of THORNWALDT'S CYST

Marsupialization is the procedure of choice to avoid recurrences (Weissman, 1992). Differential diagnosis is

1. Tuberculosis in which the contents show AFB and history of previous Tuberculosis
2. Rathke's pouch cyst which shows internal stratified squamous lining on histopathology
3. Adenoid retention cyst which shows lymphocytes filled inside the matrix
4. Branchial cleft cyst which will be laterally placed in the nasopharynx
5. Meningocele or sphenoid sinus mucocoele or Nasopharyngeal carcinoma which shows bone erosions on CT scan.

Our patient was 32 years male with only complaint of bilateral decreased hearing and no other Ear, Nose, Throat complaints and also did not have past history of tuberculosis. Patient was not improving with medical management which included antihistaminic, mucolytics and vasoconstrictor nasal drops. CT

scan Patient was posted for Nasal endoscopic surgery. Marsupialisation with debrider was done by endonasal approach and post op Histopathological report was suggestive of Thornwalds cyst. Patient had improved symptomatically and also hearing improved postoperatively.

Conclusion

Thornwaldt's cyst is a rare entity. Patients may present with only Bilateral decreased hearing. And if Tympanometry is suggestive of type B curve then the patient should be further evaluated and posted for CT scan of nasophartnx to rule out the diagnosis of Nasal mass. The possibility of Thornwald cyst should be kept in mind even though it is a rare entity. The final diagnosis can be confirmed with histopathology report.

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