



Thornwaldt Cyst: A Rare and Often, Overlooked Nasopharyngeal Lesion

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Sangamitra V., et al.**Abstract**

Thornwaldt's bursa is a recess in the middle of the nasopharynx caused by residual notochord remnants of residual notochord. Also known as nasopharyngeal bursa. A Thornwaldt's cyst may form if its aperture becomes obstructed. This might result from an infection or an adenoidectomy complication.

In this case, 46 -year-old woman presented with nasal obstruction for 6 months. Nasal endoscopy revealed a large mass in nasopharynx. Magnetic resonance imaging revealed a 3 -3.5 cm lesion with moderate T1-weighted and high T2-weighted signal intensity. There was no evidence of bony destruction or communication to the intracranial. The cyst was removed by marsupialization via endoscopy. Here we are discussing the management and diagnosis of a nasopharyngeal cyst

Keywords: Nasal Obstruction; Nasopharyngeal Cyst; Thornwaldt Cyst; Magnetic Resonance Imaging; Marsupialization**Introduction**

Thornwaldt cyst is a uncommon developmental lesion located in the middle of the nasopharynx which manifests in people between the ages of 15 and 30. It is cystic in consistency which is usually located in the midline of the nasopharynx. Cysts are usually asymptomatic, small in size and found accidentally in imaging.

When inflamed it may lead to features like nasal obstruction, postnasal discharge, halitosis, Eustachian tube dysfunction and headache. Histopathology confirms the diagnosis, which is established by history and diagnostic imaging (nasoscopy, computed tomography or magnetic resonance imaging).

Asymptomatic thornwaldt cysts often don't require management while symptomatic ones require surgical excision. We present a case of Thornwaldt's cyst that presented with nasal obstruction and was effectively treated with endoscopic marsupialisation.

Case Presentation

A Female patient of 48 years old presented to ENT OPD complaining of history of difficulty in breathing and bilateral nasal obstruction for 6 months. She is known case of rheumatoid arthritis and on medical line of management. The patient was initially treated in other clinics and was conservatively with antihistaminics and nasal steroid sprays. Despite the treatment, the symptoms persisted. Examination of nose and otoscopic findings were normal. Well encapsulated, large oval mass arising from the posterior wall of the nasopharynx which was covered with smooth mucosa was noted in diagnostic nasal endoscopy using zero-degree endoscope.

Patient underwent a contrast enhanced computed tomography scan, which confirmed the hypertrophy of the posterior wall of the nasopharynx hypertrophy and well-rounded mass protruding into right choana.

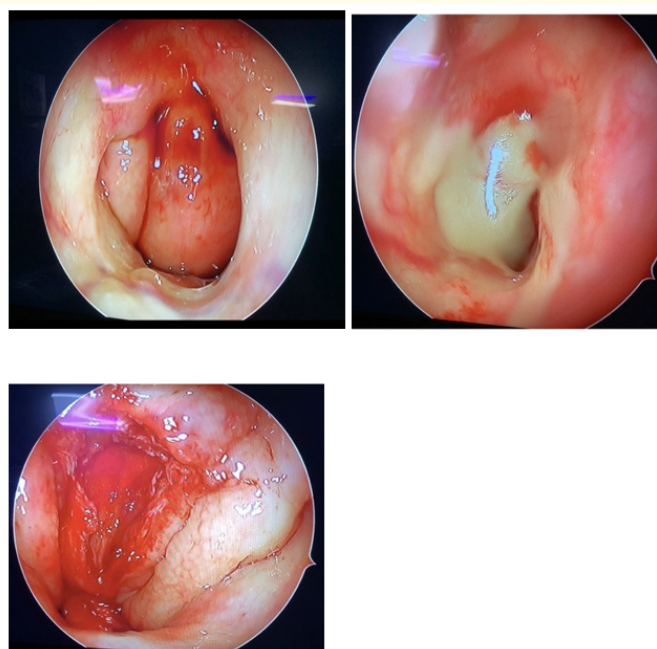


Figure 1: A- Posterior wall of nasopharynx revealed oval shaped mass, B - On aspiration Chessy material noted from the mass. C- After removal of mass.

The cyst was successfully marsupialized using an endonasal endoscopic method with hard endoscopes and powered instruments and 2 – 3 ml of exudate Chessy material was aspirated from the cyst. Histopathological examination indicated a respiratory-lined epithelial cyst. Thornwaldt's cyst was diagnosed using clinical, endoscopic, radiographic, and histological evidence. The patient had symptoms free with no signs of recurrence at 3 months, 6 months, 1 year follow up.

Discussion

Thornwaldt's cyst is a cyst which is benign in nature, midline, arises from nasopharynx and bounded anteriorly by mucosa and bounded by longus muscles posteriorly [1].

In 1840, Mayer described for the first time that resembles a cyst in the nasopharyngeal posterior wall. It is named after Gustav Ludwig Thornwaldt (1843-1910), a German physician who described it as a pathological entity in 1885 [2].

In 1912, According to Huber's description of Thornwaldt's bursa embryologic origin, a possible gap may form in the nasopharynx where the notochord remained united with the pharyngeal endoderm [2].

Thornwaldt cyst is a continuous connection between the roof of the nasopharynx and the notochord. It occurs when an open space forms in the nasopharynx where the pharyngeal ectoderm and notochord maintain their connection, causing the ectoderm to pouch into the pharyngobasilar fascia [3]. Cysts develop when mucus is secreted by epithelial lined pouch. A cyst forms because of edema at the pharyngeal diverticula orifice during inflammation.

Classified into two types - Crusting and cystic. Crusting forms drain frequently and spontaneously into the nasopharynx, whereas cystic forms do not drain because the drainage channel is totally clogged [4].

The cause could be inflammation, mechanical blockage, or a pharyngeal bursa abscess. Adenoidectomy is an etiological component in 75% of instances [5].

Nasal discharge, occipital headache, and halitosis are the cardinal features of the cyst [1].

Nasal endoscopy is performed, which is a straightforward and quick procedure to visualise the cyst, which is usually found in the posterior midline in the superior recess of the nasopharynx [6].

A CT scan reveals a low-density, capsulated mass in roof of nasopharynx suggests of thornwaldt cyst [7].

Asymptomatic cysts do not require therapy [8]. Symptomatic cysts require surgery by marsupialisation. An endonasal approach is indicated for small lesions. Removal of cyst by surgery or marsupialization is the treatment of choice.

In our case, patient underwent marsupilazation via endoscopy using microdebrider. Transnasal endoscopic marsupialization offers a clear surgical view and prevents damage to the Eustachian tube orifice. A one-year follow-up revealed that the patient had recovered satisfactorily.

Conclusion

Tornwaldt's cyst can cause nasal blockage and should be considered when other reasons are ruled out. The endonasal endoscopic approach and cyst marsupialization using powered instruments result in lower morbidity and better postoperative outcomes.

Ethical Standards

Informed consent taken from the patient, research involving human participants, NO conflicts of interest.

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