

Thornwaldt cyst –Our Experience

Dr Ramagiri Vijay Kumar^{1*}, Dr Naveen kumar Korivipati², Dr N RadhaKrishna³, Dr S Indira⁴, Dr Rama Krishnaiah P⁵

¹Associate Professor, ²Assistant Professor, ³Professor and HOD, ⁴Professor, ⁵Senior resident, Department of ENT, Bhaskar Medical College, Yenkapally, Moinabad, Telangana

*Corresponding Author:

Name: Dr Ramagiri Vijay kumar

Email: drvijaysvr@gmail.com

Abstract: Thornwaldt's cyst is a rare cyst like lesion located in the posterior wall of the nasopharynx. It is usually a developmental abnormality where communication between pharyngeal endoderm and notochordal remnants persist. If symptomatic they cause nasal obstruction, nasal regurgitation, postnasal drip or occipital headache. Nasal endoscopy is the easiest way to visualize this during a routine ENT examination. If in any doubt, MRI is the most sensitive method for detecting and evaluationg the cyst. The cyst is usually hyperintense in T2 weighted images. Surgery by marsupialization is the treatment option.

Keywords: Thornwaldt cyst, Nasopharyngeal cyst, Tornwaldt cyst.

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.”[1]. 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 [2]. Most of them remain asymptomatic and are usually an incidental finding either on endoscopy on CT/MRI scan [3] taken when patient come for some other problems. Only symptomatic cases needs to be treated. Apart from symptomatic treatment, treatment of choice is surgery with powered instrumentation under endoscopic guidance or it is marsupialisation of the sac. Usually there is no recurrence after marsupialisation.

We have incidentally detected 4 cases of Thornwaldt's cyst between 2012 to 2014. 3 of these patients were identified and operated at Bhaskar medical college and one patient at Sunshine hospital in secunderabad.

PATIENTS AND METHODS

4 patients were incidentally detected with Thornwaldt's cyst. We would like to discuss each patient individually in this study.

CASE REPORTS

Case 1.

A 28 year female patient attended the ENT OP at Sunshine hospital, with complaints of difficulty in swallowing, pain on swallowing. She had a history of nasal regurgitation of food and rhinolalia clausa. Routine ENT examination was normal. On DNE we found smooth mucosa covered swelling in the nasopharynx. On further investigation it on MRI scan a hyperintense lesion on T2 weighted image was present confirming the diagnosis of Thornwaldt's cyst. Patient was taken up for marsupialisation of cyst under general anaesthesia. Post operative period was uneventful.



Fig-1: Endoscopic view of the nasopharynx showing Thornwaldt cyst.

Case 2

A 22 year female patient presented to ENT Op of Bhaskar medical college with complaints of occipital headache along with nasal obstruction. Routine ENT examination was normal. On DNE we found smooth mucosa covered swelling in the nasopharynx. On further investigation it on MRI scan a hyperintense lesion on T2 weighted image was present confirming the diagnosis of Thornwaldt's cyst. Patient was taken up for marsupialisation of cyst under general anaesthesia. Post operative period was uneventful.

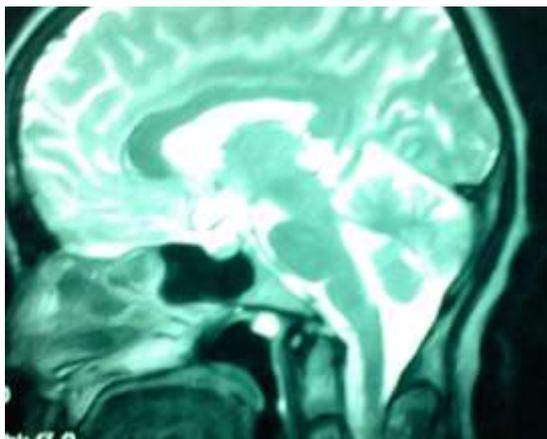


Fig-2: MRI showing hyperintense lesion in nasopharynx

Case 3.

A 34 years old female patient presented to Bhaskar Medical college ENT OP with complaints of rhinolalia clausa, nasal obstruction and regurgitation of food. patient also had mild headache. On ENT examination there was decreased movement of soft palate. On nasal endoscopy smooth swelling noted in nasopharynx. On further investigation it on MRI scan a hyperintense lesion on T2 weighted image was present confirming the diagnosis of Thornwaldt's cyst. Patient was taken up for marsupialisation of cyst under general anaesthesia. Post operative period was uneventful.

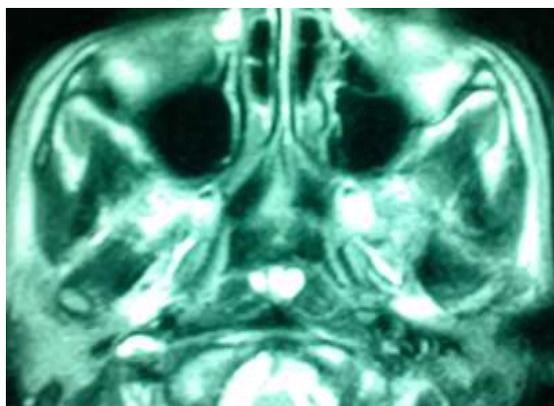


Fig-3: Hyperintense lesion in nasopharynx with septations

Case 4:

A 28 year male patient presented to us with only nasal obstruction and post nasal drip. Routine ENT examination was normal. Nasal endoscopy showed smooth swelling which was later on was confirmed as thornwaldt's cyst on CT scan. Patient was taken up for marsupialisation of cyst under general anaesthesia. Post operative period was uneventful.



Fig-4: CT scan showing cyst like lesion



Fig-5: Intraoperative view of the cyst



Fig-5: Cyst after marsupialisation

DISCUSSION

Tornwaldt first described Thornwaldt's disease "as one of the causes of epipharyngitis, and is an inflammation or abscess of the embryonic remnant cyst of the pharyngeal bursa appearing at the posterior median wall of the nasopharynx. symptoms can often be caused by nasal tamponade, trauma, adenotomy, or other mechanical stimuli" [4]. Though as per Douraid

Ben Salem et al [5] “Most nasopharyngeal cysts are symptomless and are often fortuitously discovered on rhinoscopy or cross sectional imaging”, some studies quote that common symptoms associated with thornwaldt cyst are headache, seizures, dizziness/vertigo, and pharyngeal symptoms (i.e., sore throat and postnasal drip)[6]. These symptoms were quite consistent with the symptoms of our patients. patients in our study had post nasal drip, head ache. Two of the patients had pharyngeal symptoms related to nasopharynx like rhinolalia clausa, nasal regurgitation. This could probably because of inflammation in the surrounding tissue that decreased movement of the soft palate thus causing regurgitation and the mass obstructing the airflow causing rhinolalia clausa. Occipital head ache in one our patient was probably because of spasm of muscles. All our cases were confirmed by endoscopic examination and radiological evaluation especially CT and MRI. MRI is the investigation of choice[7]. Surgical treatment is done for symptomatic patients . Excision or Marsupialization of the cyst is the surgery of choice [8]. None of these patients reported back with recurrence of problem till date.

CONCLUSION

Though uncommon diagnosis of Thornwaldt cyst should be kept in our mind for patients with vague symptoms and for those patients where post nasal drip or head ache are not relieved by conventional therapy. Radiological investigations especially MRI stands out to be the standard investigation in diagnosing the lesion. Surgery if necessary, marsupialisation of sac is the treatment of choice.

REFERENCES

1. Dorland's medical dictionary
2. Lin JH, Tai CF, Lee KW, Ho KY, Kuo WR, Wang LF; Huge Thornwaldt's cyst: a case report. *Kaohsiung J Med Sci.* 2006;22(10):524-528.
3. Yuca K, Varsak YK; Thornwaldt's Cyst. *Eur J Gen Med,* 2012; 9(1):26-29.
4. Miyahara H, Matsunaga T; Tornwaldt's disease. *Acta Oto-Laryngologica,* 1994; 114(S517):36-39.
5. Salem DB, Duvillard C, Assous D, Ballester M, Krausé D, Ricolfi F; Imaging of nasopharyngeal cysts and bursae. *European radiology,* 2006; 16(10):2249-2258.
6. Moody MW, Chi DH, Chi DM, Mason JC, Phillips CD, Gross CW, Schlosser RJ; Tornwaldt's cyst: incidence and a case report. *Ear, nose, & throat journal,* 2007; 86(1): 45-47.
7. Baisakhiya N, Deshmukh P, Pawar V; Tornwaldt cyst: a cause of neck pain and stiffness. *Indian Journal of Otolaryngology and Head & Neck Surgery,* 2011; 63(1):147-148.
8. Som PM, Curtin HD; *Head and neck imaging.* Elsevier Health Sciences. 2011.