Original Research Paper

Volume - 13 | Issue - 03 | March - 2023 | PRINT ISSN No. 2249 - 555X | DOI : 10.36106/ijar

Otorhinolaryngology

A RARE CASE OF NASOPHARYNGEAL CYST - THORNWALDTS CYST

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ABSTRACT Thornwaldt's cyst is a rare benign midline nasopharyngeal cyst induced due to persistent notochord remnants. Most of them are small and asymptomatic. If symptomatic, symptoms are of nasal obstruction, post nasal drip, halitosis, headache, eustachian tube dysfunction. Here is case of 41 year old male patient with complaints of bilateral nasal obstruction from 1 year and post nasal drip from 1 month. Diagnostic nasal endoscopy showed a cystic mass in midline of posterior nasopharyngeal wall. Contrast enhanced computed tomography (CE - CT) of nose and paranasal sinuses showed ill defined lesion in midline of posterior nasopharyngeal wall with no contrast enhancement suggestive of Thornwaldt's cyst. Diagnosis was made based on diagnostic nasal endoscopy and radiological findings. Patient underwent complete excision of the cyst using transnasal endoscopic approach using high powered microdebrider. We report this case to highlight the usage of the transnasal endoscopic approach and high powered microdebrider for management of Thornwaldt's cyst.

KEYWORDS : Nasopharyngeal cyst, diagnostic nasal endoscopy, CE-CT nose and paranasal sinuses , high powered microdebrider.

INTRODUCTION

Thornwaldt's cyst is rare benign developmental midline nasopharyngeal cyst induced by the persistent notochord remnants. The contact between the persistent notochord remnants and pharyngeal ectoderm creates the in growth of pharyngeal respiratory epithelium, which forms a bursa. This bursa drains into nasopharynx through an ostium. If this ostium gets obstructed be it mechanical obstruction, inflammation or after adenoidectomy the bursa develops into the cyst, Thornwaldt's cyst. Adenoidectomy has been implicated as an etiological factor in more than 75% of cases [1]

CASE REPORT

A 41 year old male patient presented to ENT outpatient department with complaints of bilateral nasal obstruction from 1 year and post nasal drip from 1 month. Nasal obstruction has been aggravated since a month. No other nasal complaints, ear or throat complaints were present.

On examination, anterior rhinoscopy and otoscopic findings were normal. Diagnostic nasal endoscopy using 00 , 4mm rigid nasal endoscope, a cystic mass was noted in midline of posterior nasopharyngeal wall. Patient was advised for contrast enhanced computed tomography (CE-CT) of nose and paranasal sinuses. CE-CT nose and paranasal sinuses showed an ill defined lesion in midline of posterior nasopharyngeal wall with no contrast enhancement suggestive of Thornwaldt's cyst. Diagnosis of Thornwaldt's cyst was made based on diagnostic nasal endoscopy and radiological findings.

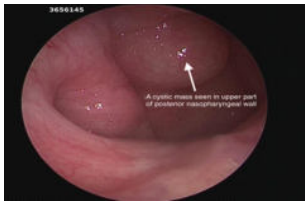

Figure 1: DNE - showing cystic mass in midline of posterior nasopharyngeal wall.

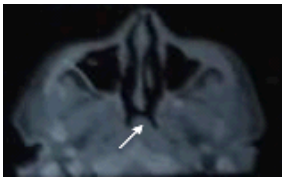

Figure 2: CE-CT nose and paranasal sinuses - showing cystic mass in midline of posterior nasopharyngeal wall with no contrast enhancement

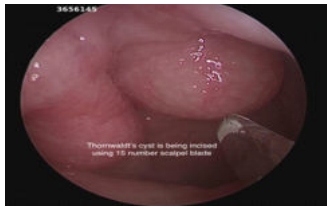

Figure 3: Intraoperative endoscopy image showing incision of cyst

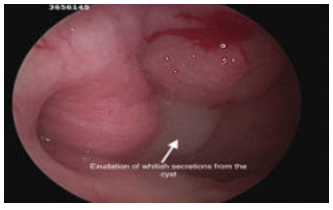

Figure 4 : Intraoperative endoscopy image showing exudation of whitish secretions from the cyst

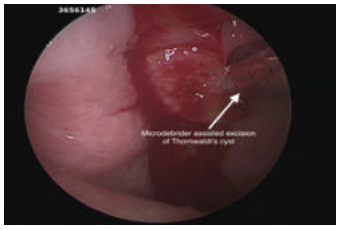

Figure 5: Intraoperative endoscopy image showing microdebrider assisted excision

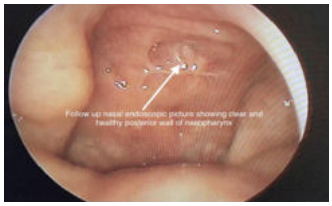

Figure 6 : Post operative endoscopy image showing clear and healthy posterior nasopharyngeal wall

Patient underwent complete excision of the cyst by transnasal endoscopic approach using high powered microdebrider. Patient was relieved of the nasal obstruction and post nasal drip following the surgery. Regular follow ups for about 6 months were done and patient is symptom and disease free.

DISCUSSION

Thornwaldt's cyst is rare benign developmental midline nasopharyngeal cyst induced by the persistent notochord remnants. It is also known as nasopharyngeal bursa, pharyngeal bursa, Thornwaldt's cyst. It was first noted by Mayer in 1840 in autopsy specimens [2]. In 1855, German physician Gustav Ludwig Thornwaldt, presented 26 cases of nasopharyngeal cysts [3]. Huber later described its formation, irregular notochord regression in sixth week of gestation resulting in it's formation [4].Thornwaldt's cysts are seen in all age groups, with peak incidence of 15-30 years [5]. There is no sex predilection. Incidence is 1.4% - 3.3% in autopsy specimens and incidental MRI findings incidence is 0.2% - 5% [6].

Most of the Thornwaldt's cysts are small and asymptomatic. If symptomatic, symptoms are of nasal obstruction, post nasal drip, occipital headache, halitosis, eustachian tube dysfunction. Detailed history taking, complete ear, nose, throat examination is essential. Diagnostic nasal endoscopy is a simple, outpatient department (OPD) based procedure which helps us to give a rapid diagnosis.In diagnostic nasal endoscopy a cystic mass in midline of posterior nasopharyngeal wall be noted [7]. MRI of nose and paranasal sinuses is best imaging study to diagnose Thornwaldt's cyst [8]. CE-CT nose and paranasal sinuses was done in our case and findings were ill defined lesion in midline of posterior nasopharyngeal wall with no contrast enhancement.

Asymptomatic cysts, which are incidental findings on CT/MRI of nose and paranasal sinuses, require no treatment [9]. Symptomatic cysts require marsupialisation and complete excision [7]. For small cysts transnasal endoscopic approach is recommended and for larger cysts occupying entire of the nasopharynx trans oral transvelar approach using 70^0 endoscope is treatment of choice [8]. In our case marsupialisation and complete excision of the cyst was done through transnasal endoscopic approach using high powered microdebrider. This case report is to highlight the usage of high powered instrumentation like microdebrider for the surgical management of the Thornwaldt's cysts.

CONCLUSIONS

Thornwaldt's cyst can present as nasal obstruction and post nasal drip. Even though the diagnosis of Thornwaldt's cyst is rare, it should be considered as one of the differential. Once diagnosed should be managed appropriately. Transnasal endoscopic marsupialisation and complete excision of the cyst using high powered microdebrider is associated with minimum morbidity and low post operative complications.

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