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Clinical Presentation of Thornwaldt's cyst

Drahaman A.M.P., Vara N., Bickerton R.C.

Warwick Hospital, Uk.

The 76-year-old gentleman presents to the outpatient's department with an 8 weeks history of deteriorating hearing on the right side. This was on top of a background of bilateral mixed hearing loss. He regularly attends the ENT outpatient department for de waxing on a 3 monthly basis and was already provided with hearing amplification for both ears. He also complained of increasing nasal obstruction and a change of voice over the past few months. He was an ex-smoker (stopped more than five years ago) and takes alcohol on occasion. Past medical history included ischaemic heart disease, chronic back pain for which he has received treatment and 'alarmingly' a high degree of sensitivity for topical lidocaine spray which made flexible nasendoscopy particularly tricky.

General examination was unremarkable; no nodes were detected in the neck but decreased air entry was noted through his nasal passages. Flexible nasendoscopy (FNE), done without local anaesthetic, showed a cystic lesion in the postnasal space which was pressing on the right eustachian tube opening. Urgent contrast CT scan showed a well-defined mildly enhancing Mass of 3.12 x 2.76 x 2.58cm in size within the right half of the nasopharynx extending from the skull base superiorly to the soft palate inferiorly. Audiometric analysis showed presence of a glue year on the right side. (Air-bone gap with type B Tympanogram).

Urgent transnasal endoscopic surgical excision / marsupialization under a local anaestheticwas planned due to the patient's high risk for a general anaesthetic. Samples were sent for histology and flow cytometry. Histology revealed a benign lesion lined with respiratory type epithelium and a mild chronic inflammatory type infiltrate. Flow cytometry was negative for lymphoma. A diagnosis of Thornwaldt's cyst was made.

Post excision the patient's hearing improved along with his voice and nasal airway. He still attends regular outpatient review and microsuction for his persistent earwax. No recurrence of the cyst was noted at his 6th month clinic follow-up.

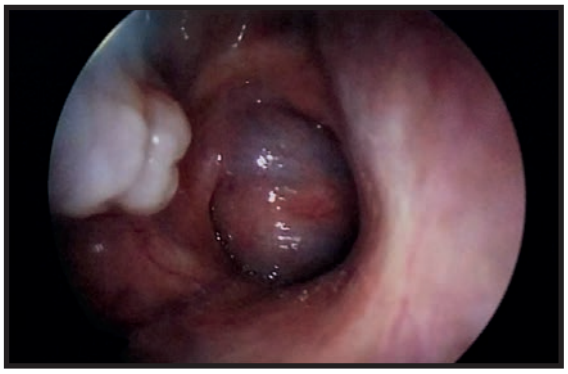

Fig 1 - Endoscopic View – Post nasal space lesion

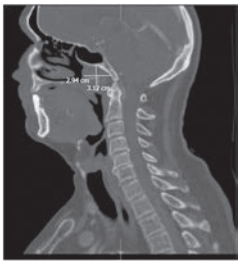

Fig 2 - Contrast CT –Sagittal section

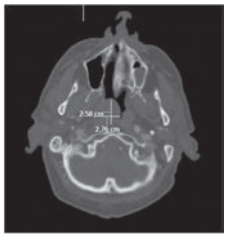

Fig 3 - Contrast CT – Axial section

Discussion.

Thornwaldt's cyst is a benign nasopharyngeal lesion found in the midline, formed as a result of the retraction of the notochord at the point

it contacts with the endoderm of the primitive pharynx [4]. It was first discovered by Mayer in 1840[1]. By performing a series of pathological assessments Thornwaldtlater redefined it in 1885 [2]. It has an autopsy prevalence of 4% with no apparent gender bias [4].The usualage at presentation of symptomatic cysts are from 15 to 30 [8].

The cyst may be entirely asymptomatic or present as a nasal obstruction in most cases[3]. In our case the patient presented with a triad of symptoms including nasal obstruction, unilateral otitis media with effusion on the right side and an altered voice (Hyponasal voice) Interestingly his symptoms developed over a period of eight weeks compared with the classical prolonged history which also made us suspicious of a more sinister pathology. Other clinical features such as occipital headache, pharyngeal pain, purulent postnasal drip with a foul taste, and changes in olfaction have also been reported [3].

These lesions have a characteristic appearance radiologically as they present as well circumscribed lesions immediately deep to the mucosa. They are variable in size but typically present as 2 to 10 mm masses [5]. On CT scan dear peer as well circumscribed low density non-enhancing lesions. Our patient's lesion was significantly bigger measuring at 3.12 x 2.76 x 2.58cm hence resulting in the above clinical features. Thornwaldt's cysts have been reported to get infected occasionally resulting in inflammatory reaction causing internal obstruction to natural cyst fluid drainage. This in turn may cause a rapid increase in their size. We believe this was the case with our patient. There has been a case of Thornwaldt's cyst formation concurrent with chemotherapy for nasopharyngeal carcinoma [6].

The diagnosis of Thornwaldt's cyst should always be considered alongside the following differential diagnosis[7].

- Malignant
    1. Nasopharyngeal carcinoma (NPC)
    2. Minor salivary gland tumours
- Benign
    1. Mucous retention cyst
    2. Neurenteric cysts
    3. Meningocoele

Asymptomatic lesions usually require no treatment. However, when they do become symptomatic, marsupialisation (the de-roofing) of the cyst can be performed endoscopically [3]. Aspiration of the cyst yields poor results as they are known to re-form over a period of time. The approach for the lesion can be transnasal or transoral (retro alveolar)[3]. There has been a recent trend in endoscopic excision using powered instrumentation of the cysts although, case reports of such are few and far between [3]. Prognostic reports with regard to surgical excision were not available to date. Further research in this regard is needed.

Key Messages.

Thornwaldt's cysts should not be forgotten when the differential diagnosis of a nasopharyngeal mass is considered. Treatment is straightforward (endoscopic marsupialisation). This can be performed under sedation if needed.

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