

NASAL WHISTLER – AN UNUSUAL CASE OF WHISTLING FROM NOSE– AN ACCIDENTAL PRESENTATION OF A THORNWALDT’S CYST

Shahul Hameed A¹, P. Muraleedharan Nampoothiri², Aneesa Pookunju³

¹Additional Professor, Department of ENT, Government Medical College, Kozhikode.

²Professor and HOD, Department of ENT, Government Medical College, Kozhikode.

³Junior Resident, Department of ENT, Government Medical College, Kozhikode.

ABSTRACT

BACKGROUND

Thornwaldt’s cyst is a mucosal cyst formed in the posterosuperior wall of nasopharynx in the midline, which is usually asymptomatic, incidentally found on radiological or endoscopic examination. Nasal whistling sound is produced by passage of air through a narrow lumen or hole, commonly septal perforations of different causes and foreign bodies like the whistle used in toys. In this case, nasal whistling sound was produced from a perforated Thornwaldt’s cyst on deep inspiration. The Thornwaldt’s cyst was asymptomatic in this lady and became symptomatic following a head trauma, with an unexpected symptom of nasal whistling sound.

KEYWORDS

Thornwaldt’s Bursa, Thornwaldt’s Cyst, Nasopharyngeal Cyst.

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CASE REPORT

A 47-year-old female housewife presented with whistling sound from nose on deep breath, which occurred immediately after a coconut fall accidentally over her head. No other symptoms associated. No relevant past history of trauma or surgeries undergone. General examination was normal, no neurological deficit. Anterior and posterior rhinoscopy was within normal limits. Oral cavity, oropharynx, direct laryngoscopic examination showed no abnormalities. Routine and screening haematological tests were normal. X-ray of nasopharynx and soft tissue neck lateral view was normal. Diagnostic nasal endoscopy was done under local anaesthesia. Nasal cavity was normal and no pathology noted. A small hole was noticed on the midline of upper part of posterior wall of nasopharynx. On deep inspiration, the hole covered by secretions opened by the inspired air producing a whistling sound from there. Suction was done over the hole and found it was an opening of a sac filled with mucous secretions. Whistling sound was confirmed on further deep inspiration by air flow into the sac. So it was a Thornwaldt’s cyst opened due to the impact of coconut fall over the head. The opening was widened by sickle knife, the whistling sound was not produced on deep inspiration and confirmed. The cyst was marsupialised after local infiltration of 2% Xylocaine. Histopathological examination of cyst wall was lined by respiratory epithelium with underlying stroma showing reactive lymphoid hyperplasia, suggestive of Thornwaldt’s cyst. Since by the initial endoscopic examination itself diagnosis was definite, further radiological evaluation was not necessitated.

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Corresponding Author:

Dr. Shahul Hameed A,

Additional Professor,

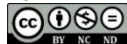
Department of ENT,

Government Medical College,

Kozhikode.

E-mail: shaentdr@yahoo.co.in

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DISCUSSION

Thornwaldt’s bursa or nasopharyngeal bursa is a recess in the midline of posterosuperior wall of nasopharynx, formed from notochordal remnant.¹ When the bursa is covered by mucosa, occluding to form a mucosal cyst² it is called a Thornwaldt’s cyst. In 1885, German physician Gustav Thornwaldt’s described clinical symptoms and treatment of nasopharyngeal cyst in detail. The anterior wall of the cyst is formed of only mucosa covering the preformed bursa.³ The mucous membrane of nasopharynx contains lymphoid tissue,⁴ epithelial tissue and minor salivary glands. The epithelium is ciliated, pseudostratified, columnar (respiratory epithelium) and stratified squamous elsewhere.

If pharyngeal segments of primitive notochord remain connected to the endoderm in the nasopharynx, a bursa or pouch occurs which extends towards occipital bone. The opening of this got closed by inflammation or infection in the nasopharynx, so that a cyst is formed with slight infiltration by lymphocytes. Thornwaldt’s cyst is usually asymptomatic and diagnosis is incidental on endoscopic or radiological examination. It appears clinically in 2nd or 3rd decade of life without any male or female predominance. Cases are reported between 15-60 years of age. Some presenting symptoms are postnasal drip, persistent nasal discharge, halitosis,⁵ progressive nasal obstruction, habitual snoring, occipital headache more on head movement,⁶ ear fullness or pain due to Eustachian tube dysfunction secondary to local inflammation and compression. Diagnosis is confirmed by radiological and nasal endoscopic examination. X-ray of nasopharynx, CT scan, MRI scan are the radiological assessment which demonstrate it as soft tissue mass with well-defined margin without any bony involvement. Diagnostic nasal endoscopy reveals it as a smooth submucosal mass above the adenoid pad, sometimes with yellowish hue due to cystic contents, with a central dimple or opening, occasionally darker due to haemorrhage or hemosiderin content.

Differential diagnosis of Thornwaldt’s cyst is branchial cleft cyst, Rathke’s pouch cyst, adenoid retention cyst, meningocoele, sphenoid sinus mucocoele, JNA and possibly nasopharyngeal carcinoma. Of these, Rathke’s pouch,

Thornwaldt's, adenoid retention cysts are in the midline but branchial cleft cyst is on the lateral wall of nasopharynx. Rathke's cyst has a lining of internal stratified squamous epithelium. Final diagnosis is as usual by CT, MRI, DNE and histopathological report. Transnasal endoscopic marsupialisation is the preferred treatment which is safe, fast, with better view avoiding damage to eustachian tube. Transpalatal intervention was practised for large cysts.⁷ Microdebrider & diode laser can also be used as advanced endoscopic surgery techniques but histopathological evaluation will be incomplete due to tissue destruction.

CONCLUSION

Nasal whistling sound is produced by passage of air through narrow lumen or hole as in septal perforation of different causes, foreign bodies like whistles used in toys. Thornwaldt's cyst is usually an asymptomatic cyst present in the nasopharynx and in this case, it is ruptured and perforated in the anterior wall by sudden pressure change by a coconut fall over the head, causing air flow through the perforation on deep inspiration producing whistling sound.

This kind of presentation of Thornwaldt's cyst as well as unusual cause of nasal whistling sound was not reported so far. The necessity of nasal endoscopy for all nasal symptoms is also emphasised for better visualisation and diagnosis.

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