

Nasopharyngeal Hamartoma: A Case Report and Literature Review

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ABSTRACT

Hamartoma is a non-neoplastic tumoral lesion resulting from a developmental anomaly and is characterized by the existence of cells and mature tissues common to the place of origin. Although hamartoma is common in the lung, kidney, and intestines, it is rare in the nasal cavity, the paranasal sinuses and particularly in the nasopharynx. Within the nasal cavity, the most common site of occurrence is the posterior aspect of the nasal septum. We reported a case of 15-year-old Thai male who presented with chronic rhinitis and left eustachian tube dysfunction for several months. Nasal telescopic revealed one smooth pink mass which originated from the left eustachian tube opening and another mass originated from the roof of the nasopharynx near the posterior part of nasal septum. Tumor removal was performed by endoscopic approach, and left myringotomy and a pressure equalization tube placement was done. No postoperative complications were found. Pathological diagnosis is consistent with hamartoma. After a 3 -month follow-up period, the patient still had a small residual mass in the left eustachian tube without any symptoms. Endoscopic approach enables the satisfactory role in the treatment of this rare condition.

Keywords: Hamartoma, nasopharynx

Siriraj Med J 2008;60:130-132

E-journal: <http://www.sirirajmedj.com>

Hamartoma is a tumor-liked malformation resulting from excessive overgrowth of normal cells and tissue indigenous or local to its site of occurrence. The tissues show a disorganized architectural pattern, usually not encapsulated, with ill-defined margins, and it is self-limited. It is not a neoplasm, but a developmental anomaly.¹ Hamartoma can occur throughout of the body, especially in the liver, the spleen, the kidneys, the intestines and the lungs², but is rare in the nasal cavity and the nasopharynx. Here, we report a case of a male teenage patient presenting with a left nasal obstruction and eustachian tube dysfunction from left nasopharyngeal masses for several months.

CASE REPORT

A 15-year-old man presented with a left nasal obstruction and a eustachian tube dysfunction, without

history of epistaxis, for several months. Nasal telescopic revealed two smooth pedunculated masses with normal epithelial lining. The bigger one originated from the roof of the nasopharynx (just posterior to the nasal septum) and the smaller one originated from the left eustachian tube opening (Fig 1). He also had a retraction of the left tympanic membrane due to the eustachian tube obstruction that caused a mild conductive hearing loss. Excision was performed via an endoscopic approach under general anesthesia without preoperative incisional biopsy. Radiofrequency was used to remove both masses with minimal bleeding. To avoid injury to the eustachian tube opening, the residual mass in the left eustachian tube opening was removed by through-cutting forceps as much as possible. Bleeding was checked and stopped with suction cautery. Myringotomy and a pressure equalization tube placement were performed on the left tympanic membrane to treat the left eustachian tube dysfunction.

Grossly, both masses showed polypoid nodules with a smooth surface and a rubbery firm consistency. The sizes of the specimens were 1.2x0.7x0.3 cm. and

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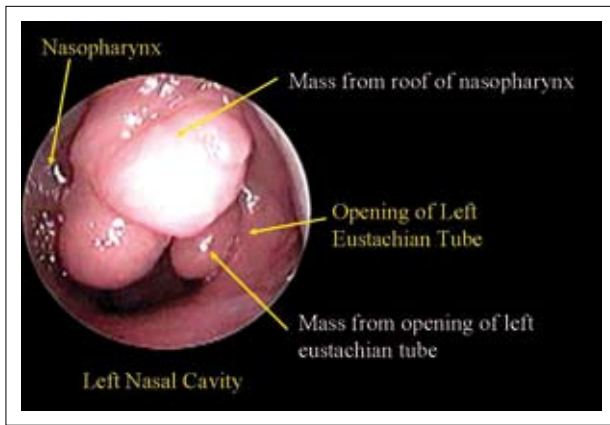


Fig 1. Left nasopharyngeal masses. The bigger one was originated from roof of nasopharynx and the smaller one was originated from left eustachian tube opening.

1x0.5x0.5 cm. respectively. Histology showed a group of normal cellular components such as glandular component, fat, and smooth muscle arranged in a disorganized architectural pattern. Neither cellular atypia nor evidence of inverted papilloma was seen (Fig 2, 3).

DISCUSSION

Hamartoma is one of the benign malformation due to developmental errors that grows slowly and obstructive symptoms can occur depending on the sites of

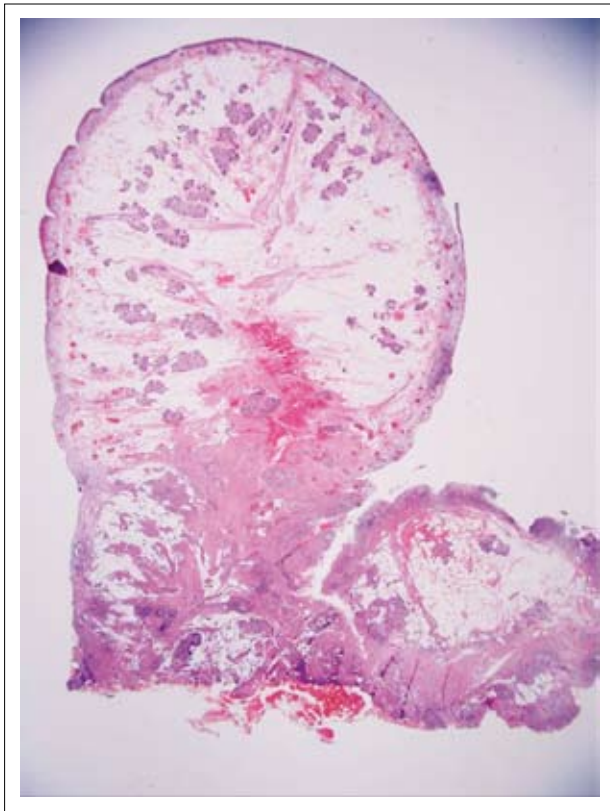


Fig 2. Light microscopic picture shows a polypoid nodule covered by benign respiratory epithelium with groups of mucous gland in the stroma composes of normal looking mature fat cells and smooth muscle arranged in disorganized architectural pattern. (H&E x12.5)

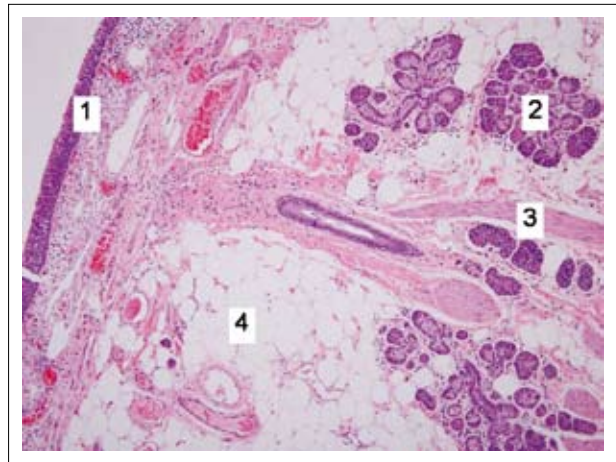


Fig 3. Higher power of figure 2 shows benign pseudostratified ciliated columnar epithelium (1), benign mucous glands (2), smooth muscle fibers (3) and benign fat cells (4). (H&E x100)

lesions. The term “Hamartoma” was first introduced by Albrecht (1904) signifying some sort of an error (hamartia - error) in growth of any of the three germinal layers. Hamartoma can potentially occur in many organs, such as the liver, the spleen, the kidneys, the intestines and the lungs. Hamartoma in the nasal cavity and the nasopharynx is rare. Until 2005, only 38 cases of hamartoma in the nasal cavity and the nasopharynx have been reported in the literatures. Nasopharyngeal hamartoma can be found in a neonate and causes respiratory distress.³⁻⁵ In Thailand, only one case of nasopharyngeal hamartoma was reported in a neonate by Utoomprukporn and colleagues.⁶

The largest case series is from the otolaryngic tumor registry at the Armed Forces Institute of Pathology by Wenig and Heffner.⁷ Thirty-one cases of hamartoma in the sinonasal tract and the nasopharynx were reported. The symptoms occurred over various time periods from as short as a few months to up to 8 years in duration with many presentations such as nasal obstruction, nasal stuffiness, deviated nasal septum, epistaxis, and chronic rhinosinusitis. Within the nasal cavity, the most common site of occurrence was the nasal septum, particularly along its posterior aspect.⁷ Differential diagnosis of these conditions includes inflammatory polyp, inverted papilloma and adenocarcinoma. Biopsy of hamartoma containing epithelial proliferation may lead to a misdiagnosis of cancer of the sinonasal region, with resultant radical and deforming surgery.^{8,9}

Since hamartoma results from spontaneous growth with excessive production of number of cells until cell maturation occurs with cessation of growth, hamartoma has no capacity for continuous unimpeded growth. Its proliferation is self-limited and has no tendency to regress spontaneously. For this reason, complete surgical removal is the treatment of choice. Particularly in the nasal cavity and the nasopharynx, endoscopic surgery is the most preferred method in most literature due to limited morbidity and a low recurrence rate as previously reported for a follow-up period of some months to several years.^{7,8,10,11} After 6 months of follow-up period, our case showed no clinical recurrence. The endoscopic approach plays the satisfactory role in the treatment of this rare condition.

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