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Nasopharyngeal pleomorphic adenoma presenting as otitis media with effusion: Case report and literature review☆,☆☆

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ABSTRACT

Most tumors arising in the nasopharynx are malignant and frequently develop otitis media with effusion (OME). On the contrary, benign nasopharyngeal tumors are very rare, and pleomorphic adenoma, which is a benign mixed tumor of the nasopharynx, is also rarely encountered. We herein report a case of nasopharyngeal pleomorphic adenoma which initially presented as OME. This tumor completely blocked the orifice of the Eustachian tube but was removed by a combination of transnasal and transoral endoscopic resection. A defect in the mucous membrane was covered with polyglycolic acid sheet and fibrin glue. Mucous membrane completely covered the exposed tubal cartilage without adhesion near the tubal orifice. OME and hearing loss completely subsided 3 months after the surgery. She was disease-free 2 years after the surgery. Use of polyglycolic acid sheet could be a feasible mesh for closure of surgical defect without scarring, and it also led to healing of OME.

1. Case report

An 80-year-old woman presented with hearing loss on the left ear for several years. She was diagnosed with otitis media with effusion (OME) on the left ear at an ENT clinic. Paracentesis of the tympanic membrane was performed, and medications were given. However, the hearing loss was recurrent. Nasopharyngeal endoscopy was conducted, and a tumor was found in the left wall of the nasopharynx. Tumor biopsy revealed pleomorphic adenoma. She was then referred to our hospital.

The nasopharyngeal tumor demonstrated a smooth surface and completely obstructed the orifice of the Eustachian tube. This tumor moved with deglutition, but it always obstructed the orifice of the Eustachian tube (Fig. 1A). An otoscopy showed middle ear effusion in her left ear (Fig. 1B). The audiogram showed mixed hearing loss with air–bone gap of 15–40 dB and an impedance audiometry showed B-type. Sonotubometry revealed complete blockage of the Eustachian tube. Computed tomography showed a 21 × 22 mm-sized tumor in the left and posterior wall of the nasopharynx. Middle ear cavity was filled with effusion, but the ossicles and other structures were intact. On magnetic resonance (MR) imaging, the tumor showed low intensity at T1 weighted-image and iso-intensity at T2 weighted-image. This tumor was well enhanced after administration of gadolinium (Fig. 2). From these findings, this tumor originated from the opening

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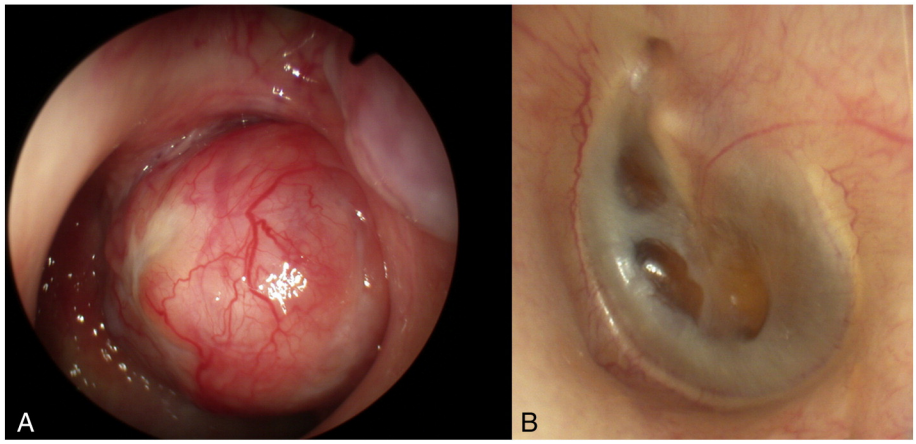

Fig. 1 – The nasopharyngeal tumor totally occluded the orifice of the Eustachian tube (A). The middle ear effusion was observed on her left ear (B).

of the Eustachian tube or the fossa of Rosenmüller and interfered with tubal function.

A transnasal endoscopic surgery was done under general anesthesia. Left inferior conchotomy was performed, and a wide surgical view was obtained. The base of the tumor was posterior to the opening of the Eustachian tube. This tumor was carefully retracted inferior by intraorally inserted curved forceps. The mucosa around the tumor was incised by fine-edged monopolar electric cautery (Colorado® microdissection needle, Stryker, USA). This tumor was slightly adherent to the mucosa and cartilage of the Eustachian tube, which caused the tubal dysfunction. The tumor was carefully and totally removed which left a wide mucosal defect. This defect was covered with polyglycolic acid seat (PGA seat; Neovail, Gunze®, Kyoto), and fibrin glue (Bolheal®, Kaketsuken-Teijin Pharma, Tokyo) was sprayed to this seat (Fig. 3). Bleeding was minimal. This white and hard tumor was measured at 21 × 19 × 19 mm.

The surgical defect gradually healed and was totally covered with normal mucosa with a completely resolved hearing loss three months after the surgery (Fig. 4A, B). No recurrence was observed 2 years after tumor removal. Both tympanic membrane and audiological data recovered completely.

2. Discussion

Benign tumors arising from the minor salivary glands occur less commonly than malignant tumors. Pleomorphic adenoma is the most common benign tumor of the minor salivary glands, but nasopharyngeal pleomorphic adenoma is rarely described. To our knowledge, there are only five reports about nasopharyngeal pleomorphic adenoma in the English literature [1–5]. Spino et al. reported 492 cases of tumor that originated from the minor salivary glands, and there were 10 patients with nasopharyngeal tumor among these cases. Only one case was diagnosed with pleomorphic adenoma, and 9 out of 10 nasopharyngeal tumors were malignant [6]. Kuo et al. reported 37 cases of pleomorphic adenoma arising from sites other than the major salivary glands, and 3 out of 37 cases were observed in the nasopharynx [7]. Symptoms of

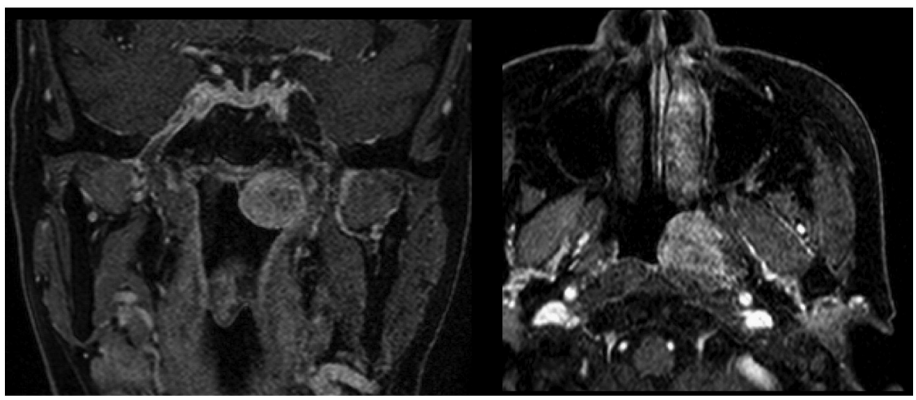

Fig. 2 – The tumor was well enhanced after administration of gadolinium. The Eustachian tube was completely blocked by the tumor.