A case of intranasal schwannoma with bilateral nasal polyposis

İki taraflı nasal polipozisle birlikte intranasal schwannom: Olgu sunumu

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Schwannoma is a benign neoplasm originating from schwann cells of the peripheral nerve sheath. Although 25-45% of all schwannomas occur in the head and neck region, the involvement of the nasal cavity and paranasal sinuses is rare (only 4% of head and neck schwannomas) with only sporadic cases having been reported in the English literature.¹²

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Schwannoma is a benign neoplasm originated from schwann cells of the peripheral nerve sheath.¹ This tumor was first described in 1908 by Wirchow.¹ Although 25-45% of all schwannomas occur in the head and neck region, the involvement of the nasal cavity and paranasal sinuses is rare (only 4% of head and neck schwannomas) with only sporadic cases having been reported in the English literature.¹²
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CASE REPORT

A 66-year-old man was referred to our clinic suffering with a 10-year history of slow progressive left nasal obstruction, hyposmia, and headache. There was no family and allergy history and aspirin sensitivity. Anterior rhinoscopic and endoscopic examinations revealed a yellowish-gray, smooth mass almost completely filling the left nasal cavity. Also a yellowish-gray, polypoid mass was present in the right nasal cavity. Computed tomography (CT) including coronal and axial scans revealed an extensive, diffuse mass occupying the left ethmoidal cells, left maxillary sinus, left sphenoid sinus and posterior area of left nasal cavity. In the right side, there was only mild obstruction in the ostiomeatal complex (Fig. 1a). Endoscopic sinus surgery (Messerklinger technique) was performed under general anesthesia. Left middle turbinate was not present. The mass was completely

Fig. 1 - (a) Preoperative view of the nasal schwannom. (b) Peroperative view of the surgical spciemen.

Fig. 2 - Spindle shaped cells with fibrillar eosinophilic cytoplasm (H-E x 200).
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removed from the ostiomeatal complex region, however because of its size; it was taken out via nasopharynx (Fig. 1b). The lesion was not infiltrative to the surrounding tissues. Endoscopic anterior ethmoidectomy was also performed in the right nasal cavity for nasal polyposis. General appearance of the mass in the right side was as usual nasal polyp. Postoperative histopathological examination revealed the left nasal mass as schwannoma. The cells were spindle shaped and formed short fascicles. The spindle cells were often arranged in a palisading fashion. Immunohistochemically, the tumor cells showed immunoreactivity for S-100 protein (Fig. 2). The other polypoid tissues were confirmed as “nasal polyp” by histopathological examination. The patient was symptom-free and endoscopic and paranasal sinus CT examinations were healthy after nine months (Fig. 3).

DISCUSSION

The differential diagnosis of nasal cavity masses includes nasal polyps, mucocele, gliomas, papilloma, neuroblastoma, various sarcomas, carcinomas and lymphomas. Schwannomas tend to be solitary and are usually well-circumscribed tumors with an oval, round or fusiform shape. Schwannomas were classified into two types; Antoni type A shows higher cellular density and content of Verocay body. Antoni type B has lower cellular density. Considering the schwannoma as the major differential diagnosis in this area is neurofibroma. It is also a benign neoplasm originated from nerve but is microscopically different. Neurofibromas may be multiple when associated with von Recklinghausen’s disease (neurofibromatosis). Nerve fibers can be seen passing through the neurofibromatosis. Risk of malignant degeneration is rarely seen in schwannomas but 8% in neurofibromatosis. There was no familial history or clinical findings of neurofibromatosis in the present case. The most common complaint of schwannomas in the nasal cavity is nasal obstruction. Epistaxis, rhinorrhea, hyposmia, facial swelling, headache, epiphora and serous otitis media are other complaints. Sphenoid sinus schwannomas may lead to cranial nerve palsy. Intracranial extension has also been reported. Progressive nasal obstruction, headache and hyposmia were the major complaints in our case. The definite origin of the intranasal schwannomas is difficult. They may arise from any of following nerves; i) general sensory branch of the ophthalmic and maxiller branch of trigeminal nerve, ii) parasympathetic fibers from the sphenopalatine ganglion, iii) sympathetic fibers from the carotid plexus. Although olfactory nerve is covered by glial cells, it cannot give rise to nerve sheath tumor. The neural origin of the nasal schwannoma in our case is probably anterior or posterior ethmoidal nerve and/or their branches, because of its localization at the ostiomeatal complex region, specifically on the middle turbinate and anterior ethmoidal cells.

Pasquini et al reported that the effectiveness of the endoscopic endonasal approach is outlined for the diagnosis and treatment of these benign tumors. We suspected the lesion as nasal polyp pre and intraoperatively. Thus we preferred endoscopic sinus surgery approach.

Appropriate surgical resection is curative for schwannomas. Recurrence is rare after total removal (23%). These tumors are radio-resistant and chemotherapy is not useful. A careful preoperative clinical and radiological examination is essential. CT and magnetic resonance imaging scans are useful for tumor extension and choosing the type of surgical resection.

REFERENCES

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