

CASE REPORT

A case of intranasal schwannoma with bilateral nasal polyposis

İki taraflı nazal polipozisle birlikte intranasal schwannom: Olgu sunumu

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Schwannoma is a benign neoplasm originating from schwann cells of the peripheral nerve sheath, and its occurrence in the nasal cavity and paranasal sinuses is rare. We present a case of nasal schwannoma originating from the left nasal cavity, accompanied by bilateral nasal polyposis. A 66-year-old man presented with complaints of progressive left nasal obstruction, hyposmia, and headache. Anterior rhinoscopic and endoscopic examinations revealed a mass that almost completely filled the left nasal cavity. A polypoid mass was present in the right nasal cavity, as well. On computed tomography, the mass occupied the left ethmoidal cells, left maxillary sinus, left sphenoid sinus, and posterior area of the left nasal cavity. Endoscopic sinus surgery was performed under general anesthesia and the mass was completely removed via the nasopharynx because of its size. Endoscopic anterior ethmoidectomy was also performed in the right nasal cavity for nasal polyposis. Histopathological diagnosis of the left nasal mass was schwannoma. The patient was symptom-free with no recurrence after nine months.

Key Words: Endoscopy; nasal polyps; neurilemmoma/pathology/surgery; nose neoplasms/surgery; tomography, X-ray computed.

Schwannoma periferik sinir kılıfının schwann hücrelerinden köken alan, benign bir neoplazidir; nazal kavite ve paranasal sinüslerde nadir görülür. Bu yazıda, iki taraflı nazal polipozisle birlikte bulunan ve sol nazal kaviteden köken alan nazal schwannoma sunuldu. Altmış altı yaşında bir erkek hasta ilerleyici sol burun tıkanıklığı, koku alma bozukluğu ve baş ağrısı yakınmalarıyla başvurdu. Anterior rinoskopik ve endoskopik incelemelerde sol nazal kaviteyi neredeyse tümüyle dolduran bir kitle görüldü. Ayrıca, sağ nazal kavitede polipoid görünümlü bir kitle vardı. Bilgisayarlı tomografide, kitlenin sol etmoid hücreleri, sol maksiller sinüsü, sol sfenoid sinüsü ve nazal kavitenin posterior bölgesini kapladığı görüldü. Genel anestezi altında endoskopik sinüs cerrahisiyle, ileri derecede büyüklüğü nedeniyle kitle nazofarenksten tümüyle çıkarıldı. Sağ nazal kavitedeki nazal polipozis için endoskopik anterior etmoidektomi yapıldı. Sol nazal kitlenin histopatolojik tanısı schwannoma idi. Ameliyattan dokuz ay sonra hastanın semptomsuz olduğu ve herhangi bir nüks gelişmediği görüldü.

Anahtar Sözcükler: Endoskopi; burun polibi; nörilemmoma/patoloji/cerrahi; burun neoplazileri/cerrahi; bilgisayarlı tomografi.

Schwannoma is a benign neoplasm originated from schwann cells of the peripheral nerve sheath.^[1,2] This tumor was first described in 1908 by Virchow.^[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.^[1-4]

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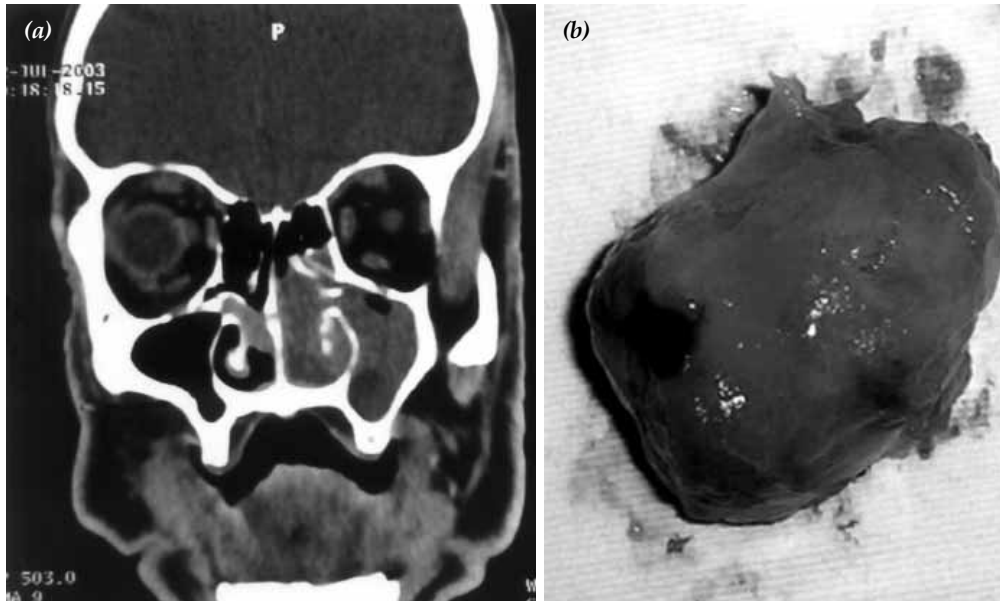


Fig. 1 - (a) Preoperative view of the nasal schwannom. (b) Peroperative view of the surgical specimen.

We presented a case of nasal schwannoma originating from the left nasal cavity and accompanied by bilateral nasal polyposis.

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 com-

pletely 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

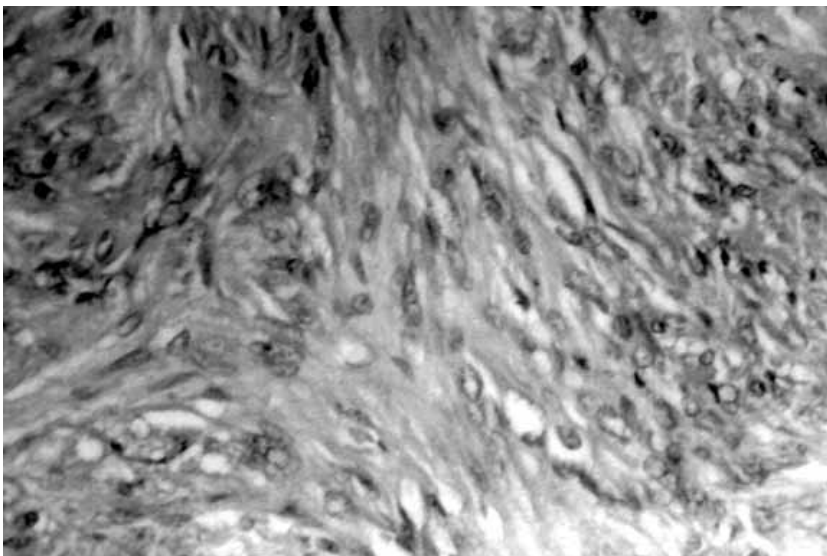


Fig. 2 - Spindle shaped cells with fibrillar eosinophilic cytoplasm (H-E x 200).



Fig. 3 - Postoperative view of the nasal cavity.

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.^[4] Schwannomas tend to be solitary and are usually well-circumscribed tumors with an oval, round or fusiform shape.^[2] 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.^[1,2] Considering the schwannoma as the major differen-

tial diagnosis in this area is neurofibroma.^[5] 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.^[2] 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.^[1] Epistaxis, rhinorrhea, hyposmia, facial swelling, headache, epiphora and serous otitis media are other complaints.^[2,6] Sphenoid sinus schwannomas may lead to cranial nerve palsy.^[2] Intracranial extension has also been reported.^[2,3] 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 maxillary branch of trigeminal nerve, *ii*) parasympathetic fibers from the sphenopalatine ganglion, *iii*) sympathetic fibers from the carotid plexus.^[3] Although olfactory nerve is covered by glial cells, it cannot give rise to nerve sheath tumor.^[3] 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.^[7] We suspected the lesion as nasal polyp pre and intraoperatively. Thus we preferred endoscopic sinus surgery approach.

Appropriate surgical resection is curative for schwannomas.^[7] Recurrence is rare after total removal (23%).^[2,5] These tumors are radio-resistant and chemotherapy is not useful.^[1] 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.^[6]

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