A rare cause of postnasal drip and nasal obstruction: Isolated sphenocoanal polyp

Geniz akıntısi ve burun tikanıklığının nadir bir sebebi: izole sfenokoanal polip

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ABSTRACT
Choanal polyps are benign solitary masses, arising within the sinus and protruding into nasal cavity. The nomenclature is made according to the sinus that it is originated from. Sphenocoanal polyp (SCP) is quite rare, originates from sphenoid sinus, passes through the sphenethmoid recess and elongates to nasopharynx and oropharynx. It may be confused with antrochoanal polyps on anterior rhinoscopy. Radiological examination with computerized tomography and nasal endoscopy are important in the differentiation of these two types of choanal polyps. Endoscopic approach for the complete removal of the SCP including its mucosa of the site of origin is extremely safe, which has minimal risk of recurrence. Herein we report a 30 years-old male patient with SCP, which was removed via endoscopic transnasal surgery. He had no recurrence at postoperative 9 months of follow-up.

Key words: Nasal obstruction, nasal polyp, paranasal sinus disease, nasal surgical procedure

INTRODUCTION
Choanal polyps are benign solitary masses, arising within the sinus, protruding into nasal cavity and most commonly originate from the maxillary sinus antrum [1]. The classification and nomenclature is made according to the sinus that it is originated from, as antrochoanal, ethmochoanal and sphenocoanal polyps (SCP) respectively. SCP is quite rare, originates from sphenoid sinus, passes through the sphenethmoid recess and elongates to nasopharynx and oropharynx. It is seen as a form of cystic polypoid mass. It may be confused with antrochoanal polyps because of their similarity in appearance and symptoms. In differential diagnosis, transnasal endoscopy, computed tomography (CT) and magnetic resonance imaging (MRI) is mainly used in the diagnosis of sinonasal masses [2].

Herein, we reported a patient with sphenocoanal polyp and discussed the diagnosis and treatment of disease.

CASE
A 30 years-old male patient referred to our outpatient clinic with the complaint of ongoing headache for two years and intermittent nasal congestion. The patient did not have a diagnosis of allergy. There was no pathology at anterior rhinoscopy. Polypoid mass was observed during the endoscopic examination of the nasal cavity. First it was thought as antrochoanal polyp. Mucosa of nasal cavity and turbinates was decongested with cotton (impregnated with 1 % lidocaine with epinephrine 1:100,000) for detailed endoscopic examination. The pedicle of the
polyp was traced with the tip of aspirator. The scope was advanced posteriorly through the nasal cavity, no pathology was observed in the middle meatus. To examine the sphenoethmoid recess, the scope was passed medial to the middle turbinate. Then the polyp was observed as originating from sphenoid sinus, causing the expansion of the anterior wall of sinus and extending to nasopharynx. In paranasal sinus tomography, a solitary mass with low density originating from right sphenoid sinus and expanding the sphenoid ostium and reaching the posterior choana was reported (Figure 1). The diagnosis was sphenochoanal polyp.

The polyp was removed with fibrous and edematous portion of underlying mucosa via endoscopic transnasal approach. Sphenoidotomy was also performed. Histopathological examination of the specimen revealed as inflammatory polyp (Figure 2). He has no recurrence at postoperative 9 months of follow-up. Written informed consent was obtained from the patient for the publication of this case report and accompanying images.

**DISCUSSION**

Although a large part of choanal polyps originate from the maxillary sinus, very rarely they can also originate from the ethmoid cells, sphenoid sinus, inferior and middle turbinate [3,6]. Choanal polyps account 4-6% of the all nasal polyps with an incidence of 1-2/10000 [1]. Isolated sphenoid polyps are extremely rare. SCP was firstly reported by Zuckerkandl in 1892. More than 50% of SCPs are observed in children [7,10]. The etiology of SCP is not clearly defined, but chronic obstruction of the sinus ostia, as well intramural cysts originating from sinuses are blamed as causative factors [11]. In addition, episodes of the recurrent sinusitis may lead to obstruction and rupture of the mucous glands, consequently cause expansion of the mucocoeles which predispose to formation of the SCP [11]. SCPs are more common in children with cystic fibrosis and immotile cilia syndrome [12]. It is widely accepted that SCP originates from a submucosal
cyst secondary to thrombosis of lymphatic vessels caused by inflammation that is related to infection or allergy[8,13]. The role of allergy or immunological deficiency is controversial. Ileri et al.[7] believe that the polyps grow under the influence of inflammatory and allergic conditions but Crampete et al.[8] do not agree. In the reported case the patient did not have a diagnosis of allergy.

Patients with SCP often apply to clinics with the complaint of headache, nasal congestion (70%), single or double sided runny nose (52%) and snoring. Foreign body sensation at nasopharynx due to mass affect, difficulty in swallowing, hearing loss associated with Eustachian tube dysfunction may be mentioned as the other symptoms [8]. For the diagnosis of SCP a detailed transnasal endoscopy, computerized tomography (in axial and coronal plane) and magnetic resonance imaging are useful. On tomography, SCP seems low density solitary mass extending from sphenethmoidal recess to choana. MRI helps in the differential diagnoses of neoplastic process such as malignant melanoma, angiofibroma and inverted papilloma [8]. The combined use of imaging techniques and diagnostic nasal endoscopy is suggested for accurate diagnosis of isolated sphenoid sinus lesions and minimally invasive techniques to be tailored to the patient's disease [10].

Endoscopically, SCP usually presents between nasal septum and middle turbinate, as opposed to the antrochoanal polyp which seems in the middle meatus and passes between the middle turbinate and lateral nasal wall [3,8]. SCP should be kept in mind in the differential diagnosis of antrochoanal polyps. Identification of the origin of the polyp endoscopically is essential for the surgical procedure. Transnasal endoscopic excision of the polyps is the treatment of choice. Since recurrence is an important problem after surgery, patients should be followed regularly. Risk of recurrence can be minimized by expanding the sphenoid ostium (sphenoidectomy) and complete removal of the cystic component and polyp with underlying edematous mucosa [14,15]. In the reported case, the polyp and underlying fibrous and edematous mucosa was excised with endoscopic transnasal approach in conjunction with a wide sphenoidotomy. The removal of posterior-inferior part of middle turbinate was suggested as optional to improve the area exposed during excision of SCP. However, it is usually not preferred to preserve the nasal physiology and anatomy [7,13]. Therefore, we did not perform it in the reported case.

Sphenoidal polyps is a rare benign mass and can cause unilateral nasal congestion, nasal discharge, headache and snoring. It should be kept in mind in the differential diagnosis of other choanal polyps and intranasal masses. Detailed endoscopic examination and imaging techniques are needed for proper evaluation of the cases. Transnasal endoscopic resection can be a quite safe method of treatment. However recurrence may be the problem, which can be prevented by complete removal of the cystic component of polyp and underlying edematous tissue. Regular follow-up is essential.

REFERENCES