

Choanal polyp originating from the nasal septum: septochoanal polyp

Nazal septumdan kaynaklanan koanal polip: Septokoanal polip

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Most of the nasal polyps arise from the lateral walls of the nasal cavity. Nasal polyps originating from the nasal septum with choanal extension are extremely rare. We report a case of large choanal polyp that arised from the posterosuperior aspect of the nasal septum, and extended down to the oropharynx. A 52-year-old woman presented with a two-year history of progressive nasal obstruction and snoring. Findings of anterior rhinoscopy were in normal limits. We think that the term "septochoanal polyp," which, as far as we know, has not been mentioned in the literature before, can be used for this rare lesion.

Key Words: Choanal polyp; endoscopic sinus surgery; nasal septum; septochoanal.

Nazal poliplerin büyük bir kısmı nazal kavitenin lateral duvarlarından kaynaklanmaktadır. Nazal septumdan köken alan ve koanaya uzanım gösteren nazal polipler son derece nadirdir. Bu yazıda, nazal septumun arka üst kısmından köken alan ve orofarenkse doğru uzanım gösteren büyük bir koanal polip olgusu sunuldu. İki yıldır burunda tıkanıklık ve horlama yakınması ile kliniğimize başvuran 52 yaşında kadın hastada anterior rinoskopi bulguları normal sınırlar içerisindeydi. Bilgimiz dahilinde literatürde daha önce kullanılmayan "septokoanal polip" teriminin bu nadir olgu için kullanımının uygun olduğu düşünüldü.

Anahtar Sözcükler: Koanal polip; endoskopik sinüs cerrahisi; nazal septum; septokoanal.

Nasal polyps may originate from any mucosal surface of the nose.^[1] Ethmoid infundibulum, the contact areas of the uncinat process and middle turbinate are the most common sites of origin.^[2] Choanal polyps are one form of the nasal polyps which grow towards the choana with a single stalk. They may further extend into the nasopharynx or even down to the oropharynx. Choanal polyps usually arise from the mucosa near the maxillary sinus ostium which is called antrochoanal polyp.^[3] Unusual origins such as sphenoid sinus, ethmoid sinus, and middle turbinate have also been reported in the literature.^[4-7] Polyps

arising from the nasal septum are rare, and extension of these lesions down to the choana was only documented in two previous studies.^[8,9]

Herein, we report a large choanal polyp originating from the nasal septum which is documented with nasal endoscopy and computed tomography, and we propose a new term for this rare lesion.

CASE REPORT

A 52-year-old woman presented with a two-year history of progressive nasal obstruction and snoring. Findings of anterior rhinoscopy were in

normal limits. A solitary mass, hanging down from the nasopharynx was seen through oropharyngeal examination. Nasal endoscopic examination revealed a polyp originating from the superior aspect of the posterior nasal septum on the left side (Fig. 1). The polyp was seen to attach to the posterior septal mucosa with a thin pedicle, and was hanging through the choana with its bulky portion situated in the nasopharynx. Computed tomography (CT) scanning demonstrated the polyp originating from the posterior nasal septum (Fig. 2), filling the entire nasopharynx, and extending to the oropharynx (Fig. 3). Aeration of the paranasal sinuses was normal.

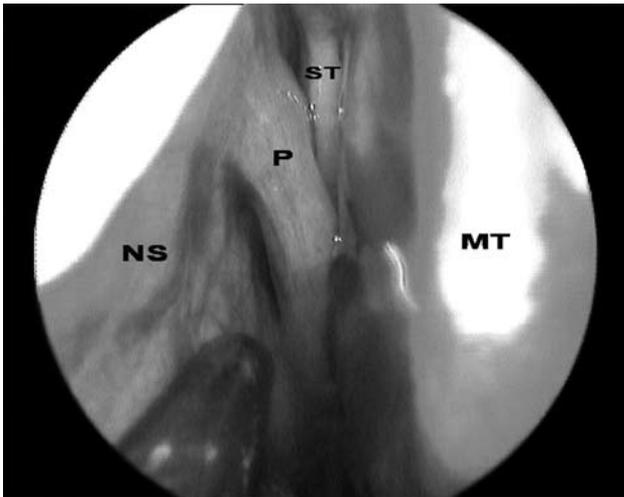


Fig. 1. Origin of the polyp under endoscopic vision (4 mm, 0°).
NS: Nasal septum; P: Polyp; MT: Middle turbinate; ST: Superior turbinate.



Fig. 2. Origin of the polyp on coronal computed tomography image. Arrow marks the arising point of polyp stalk.

The patient underwent endoscopic surgery. Pedicle of the polyp was identified at the posterosuperior aspect of the nasal septum, and was detached from the nasal septum with some healthy mucosa around it under endoscopic vision. The polyp was then taken out through the oropharynx. Neither electrocautery nor intranasal packing was needed.

Macroscopic examination of the specimen revealed a single, pediculated polypoid tissue that was measured approximately 11 cm in length (Fig. 4). Microscopically, polypoid tissue mass which was composed of a loose mucoid stroma and mucous glands, and was covered by respiratory epithelium. It was infiltrated by lymphocytes, plasma cells, neutrophils and eosinophils. The diagnosis was inflammatory polyp (Fig. 5). The postoperative course was uneventful. The patient had no symptoms during the postoperative six months follow-up period.

DISCUSSION

The description of the choanal polyps was first introduced by Killian in 1906.^[10] Since then choanal polyps have been commonly considered to be large solitary polyps originating from the mucosa of the maxillary sinus or maxillary ostium, and protruding to the choana and nasopharynx.^[7] Unusual origins such as sphenoid sinus, ethmoid sinus and middle turbinate have also been reported.^[4-7] Lopatin et al. investigated the origin of the choanal polyps in 20 consecutive patients, and identified



Fig. 3. Coronal computed tomography image showing the body of the polyp which is located at nasopharynx. P: Polyp; U: Uvula.

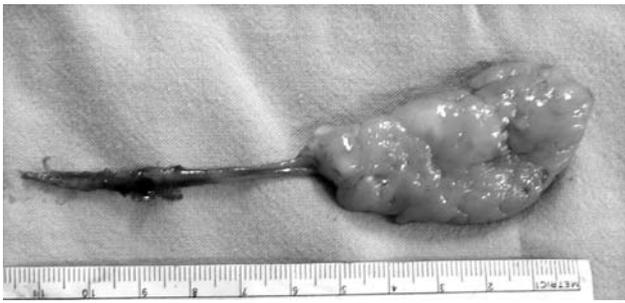


Fig. 4. Macroscopic appearance of the pediculated solitary polyp measured 11 cm in length.

sites of origin as maxillary sinus (n=11), sphenoid sinus (n=3), posterior ethmoids (n=4), anterior ethmoids (n=1), and lateral aspect of the head of the middle turbinate (n=1).^[7] Based on these findings, they classified choanal polyps as antrochoanal, sphenchoanal, and ethmochoanal. However, there are only two previous reports about choanal polyps originating from the nasal septum.^[8,9] This form of choanal polyps can be named as septochoanal polyps.

Most of the nasal polyps arise from the lateral walls of the nasal cavity mucosa of the anterior ethmoid sinuses, the contact areas of the uncinat process, and the middle turbinate.^[2] Medially based nasal polyps are rare. In a study of 200 patients, Stammberger found only three patients having polyps originating in the posterior nasal septum.^[2] Likewise, Yanagisawa et al.^[11] reported only three cases of septal polyps in 200 consecutive sinonasal surgical cases. Furthermore, choanal extension of these polyps from the septal origin are extremely rare.^[8,9]

The first choanal polyp arising from the nasal septum was reported by Bailey in 1979.^[8] It was reported as a sessile, 15 mm long polyp which was found during the examination of nasopharynx by mirrors. Second case of choanal polyp originating from the nasal septum was reported by Ozgirgin in 2003.^[9] The polyp of the second case was reported to originate from the superior aspect of posterior portion of the nasal septum. The polyp of our case was originating from the superior aspect of the posterior nasal septum on the left side, and was attached to the posterior septal mucosa with a thin pedicle (Fig. 1). It was hanging through the choana with its bulky portion situated in the nasopharynx (Fig. 3). It was a large polyp of 11 cm in length.

Polypoid nasal mucosa is a poorly understood condition that may be a part of a complex distur-

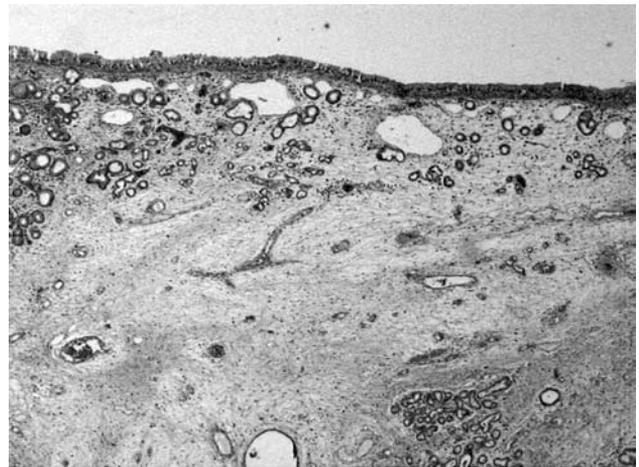


Fig. 5. Histopathologic appearance of the polyp with edematous stroma covered by respiratory epithelium (H-E x 25).

bance.^[11] The first phase of nasal polyp development is submucosal edema. However the exact cause of this initial mucosal edema is still controversial. Allergy and chronic inflammation are the etiologic factors mostly implicated in this disorder. Turbulent air flow and gravity are the local environmental factors that may lead to polyp formation.^[12] Edematous site begins to enlarge and eventually protrude over time by the effect of gravity. Another factor causing this edematous tissue to protrude is the negative pressure areas created by the air currents in the nasal cavity. Gravity and negative pressure together act to elongate the edematous mucosa and enlarge its base to form a polyp.^[12]

The preponderance of polyps to the lateral nasal wall is explained by the exposure of these sites to more air turbulence than the other structures in the nose.^[12] As a result, the lateral wall is more exposed to irritants which is suggested as the cause of inflammation leading to polyp formation. Turbulent air flow also creates negative pressure areas in the mucosa of the lateral nasal wall which stimulate foci of inflammation. On the medial wall of the nasal cavity, there are fewer pressure points.^[11] Other proposed factors are the anatomical features of the lateral nasal wall. The lateral nasal wall mucosa is thinner, less vascular, and more loosely adherent to the underlying structures than the medial wall.^[9] These characteristics may predispose the formation of polyps.

Another factor that is suggested to be important in the localization of nasal polyps is septal deviation.^[13] It is noted that deviation of the nasal

septum changes the air stream in the nose. The air stream on the concave side of the deviated nasal septum becomes much stronger than that on the convex side, and as a result polyps develop on the concave side. However, the nasal septum was normal in our patient.

The preoperative detection of the origin of polyp by nasal endoscopy is important for differential diagnosis and surgical planning. Computed tomography is also needed for preoperative evaluation. The resection of polyp with a small amount of healthy mucosa surrounding the point of origin of the stalk under endoscopic vision is sufficient.

In conclusion, nasal septum is an unusual site for the origin of choanal polyps. The term "septo-choanal polyp" can be used for this rare lesion.

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