



An unusual localization of fungiform papilloma

Fungiform papillomanın nadir bir yerleşimi

Emine Aydın, M.D.,¹ Eren Taştan, M.D.,¹ Filiz Aydoğan, M.D.,¹ Muzaffer Çaydere, M.D.²

Department of ¹Otolaryngology, ²Pathology, Ankara Training and Research Hospital, Ankara, Turkey

In this article, we presented a 54-year-old male who was admitted with complaints of nasal obstruction with snoring and mouth breathing for one year. Anterior rhinoscopy revealed a mass arising from the inferior nasal concha on the left side. After computed tomography evaluation, endoscopic examination and incisional biopsy, the mass was removed en bloc endoscopically. The histopathological analysis resulted in a diagnosis of a fungiform papilloma. Fungiform papillomas arise almost exclusively on the nasal septum, while inverted papillomas predominantly affect the lateral nasal wall. To our knowledge, no previous report of fungiform papilloma involving the inferior concha has been published in the English literature.

Key Words: Nasal concha; nasal papilloma; Schneiderian papillomas.

Bu yazıda, bir yıldır ağızdan nefes alma ve horlama ile birlikte burun tıkanıklığı yakınmaları ile başvuran 54 yaşında bir erkek olgu sunuldu. Anterior rinoskopi ile sol tarafta inferiyor nazal konkadan kaynaklanan kitle varlığı açığa çıkarıldı. Bilgisayarlı tomografi incelemesi, endoskopik muayene ve insizyonel biyopsi sonrasında kitle endoskopik yöntemle bir bütün olarak çıkarıldı. Histopatolojik analiz sonucu fungiform papilloma tanısı konuldu. İverted papillomalar belirgin olarak lateral nazal duvarı turarken, fungiform papillomalar hemen hemen yalnızca nazal septumdan kaynaklanır. Bizim bilgimize göre, İngilizce literatürde inferiyor konkayı tutan fungiform papillomanın bildirisi daha önce yayınlanmamıştır.

Anahtar Sözcükler: Nasal konka; nasal papilloma; Schneiderian papilloma.

Schneiderian papillomas (SPs) are a group of unusual nasal and paranasal sinus tumors of unknown etiology.^[1] They are uncommon, representing only 0.4-4.7% of all sinonasal tumors.^[2] They tend to occur in older, male patients and are associated with tobacco usage in 75% of patients. There are three recognized subtypes of SPs: inverting, fungiform, and oncocytic (cylindric) cell papillomas. Inverting papilloma represents 47% to 73% of the tumors, fungiform papilloma (FP) represents 19% to 50%, and oncocytic cell papilloma 3% to 8% of SPs.^[1]

Fungiform papillomas are 2-10 times more common in men, and occur in individuals between 20 and 50 years of age (range 2-87 years).^[2] Fungiform papillomas arise almost exclusively on the nasal septum, whereas the inverted form predominantly affects the lateral wall of the nose and/or the paranasal sinuses.^[3] To our knowledge, no previous report of fungiform papilloma involving the inferior concha has been published in the English literature. We report a patient with FP involving the inferior concha of the lateral nasal wall.

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Correspondence / İletişim adresi: Emine Aydın, M.D. Ankara Eğitim ve Araştırma Hastanesi Kulak Burun Boğaz Hastalıkları Kliniği, 06340 Altındağ, Ankara, Turkey.

Tel: +90 312 - 595 35 52 Fax (Faks): +90 312 - 363 33 96 e-mail (e-posta): emineaydin1971@yahoo.com

CASE REPORT

A 54-year-old man was admitted to the department of otorhinolaryngology head and neck surgery in July 2008. He complained of nasal itching and nasal obstruction with snoring and mouth breathing for one year. He gave a history of tobacco usage (half packet in a day) lasting at least 30 years. Anterior rhinoscopy revealed a mass arising from the inferior nasal concha on the left side. The septum was deviated to the right side in the valve area. Endoscopic nasal examination revealed the mass originating from left inferior nasal concha, obliterating the nasal cavity and choana. The rest of the otorhinolaryngologic examination was normal. Computed tomography of the nose and paranasal sinuses confirmed the presence of a mass in the left nasal cavity, extended to the choana (Figure 1). The paranasal sinuses were not involved. There was no evidence of bone destruction. Other physical and laboratory examinations were within normal limits and skin prick test was negative. The result of biopsy was FP. The mass, and normal inferior concha mucosa were removed en bloc endoscopically under local anesthesia.

Inspection of the specimen revealed pink, moderately firm, nontranslucent growths with a granular and clefted surface attached to the inferior concha (Figure 2). The size of the mass measured 6x4x1.5 cm. The histopathological analysis revealed a diagnosis of FP (Figure 3). There was no recurrence observed 18 months after excision.

DISCUSSION

The ectodermally derived ciliated respiratory mucosa that lines the nasal cavity and paranasal sinuses, the so-called Schneiderian membrane,

gives rise to three morphologically distinct types of papillomas. One of them is FP, which also known as exophytic papilloma, everted papilloma, transitional cell papilloma, septal papilloma, squamous papilloma, papillomatosis or Ringertz tumor.^[2]

The etiology of Schneiderian papillomas remains controversial. Proposed mechanisms include chronic infection or allergy, environmental pollutants, and smoking. Tobacco usage was reported as a significant risk factor for development of a FP and other SPs.^[1] It was reported that there was no relationship to allergy or nasal polyps.^[4] Dietmer and Wiener^[5] found a significantly higher degree of occupational exposure to different smokes, dust, and aerosols in their case group as compared to controls. In search of an etiology, recent investigations have sought to identify human papilloma virus (HPV) in SPs. Studies have found HPV, deoxyribonucleic acid (DNA) within fungiform papillomas in 50% to 100% of cases, and in 0% to 86% of cases within inverted papillomas.^[1] Studies that have shown HPV, DNA to be present in a significant proportion of FP.^[1,6-8] There is increasing evidence to suggest that FPs may be etiologically related to HPV, especially types 6 and 11, rarely types 16 and 57b.^[2] Our patient had a history of tobacco usage lasting more than 30 years, but did not give a history of any other risk factors.

The inverting and oncocyctic cell subtypes originate on the lateral nasal wall or within the paranasal sinuses and have similar biologic behavior with high rates of recurrence, as well as a known association with malignancy. In contrast, the fungiform subtype arises exclusively from the nasal septum, has a low recurrence rate, no

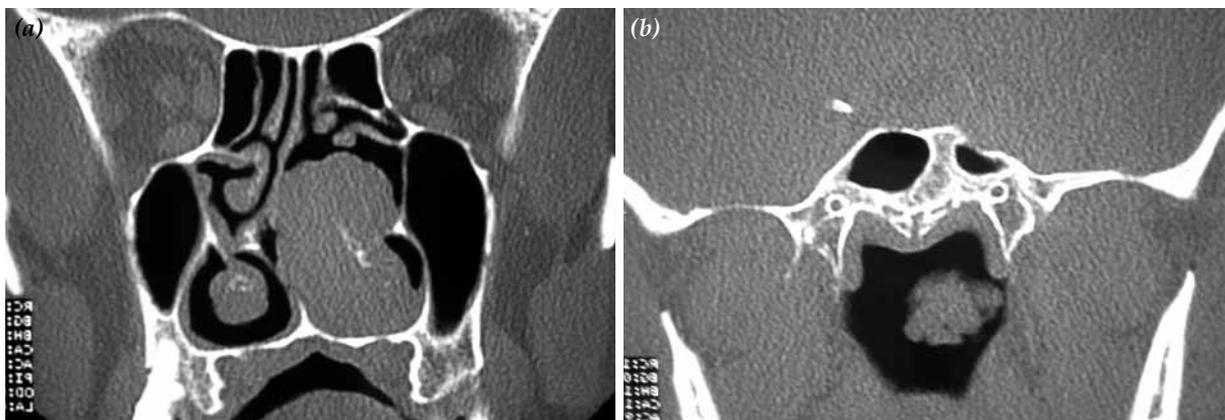


Figure 1. (a) Computed tomography of the nose and paranasal sinuses showing presence of a mass in the left nasal cavity, (b) extended to the choana.

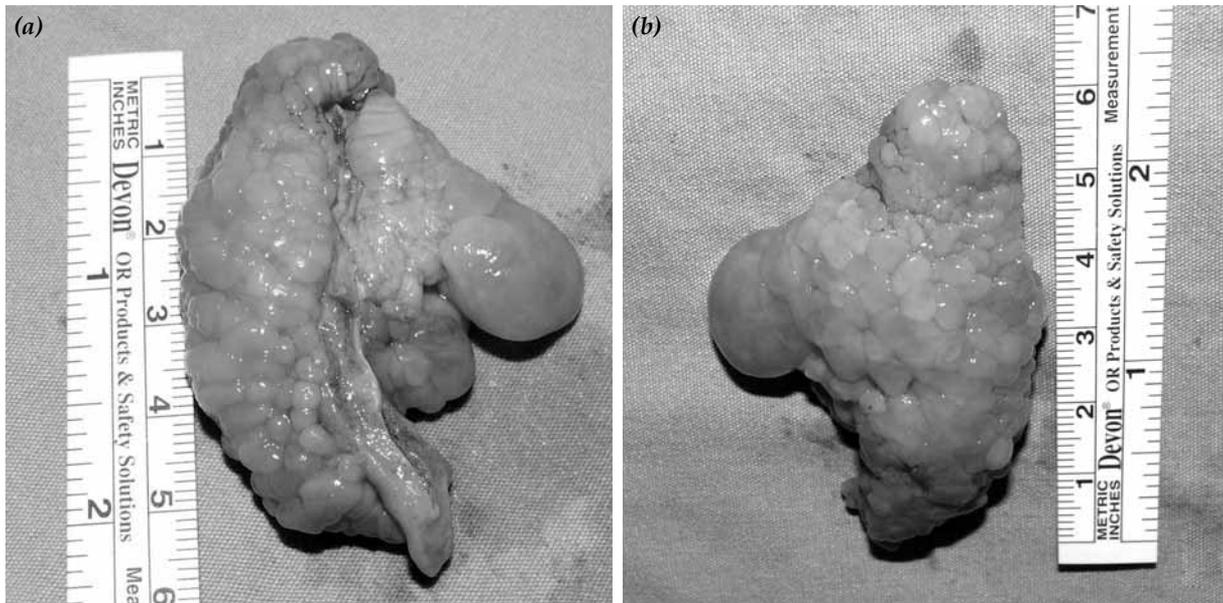


Figure 2. (a, b) Macroscopic view of surgical specimen.

significant lateralization and is not associated with malignancy.^[1] Involvement of the paranasal sinuses is practically non-existent. Bilateral lesions are exceptional.^[2] We did not encounter any case of FP located on the inferior concha in the published English literature. This localization is a rare occurrence for a FP.

Epistaxis, unilateral nasal obstruction, and the presence of asymptomatic mass are the typical presenting symptoms of FP. On physical examination, they appear as papillary or warty, grey, pink or tan, nontranslucent growths attached to the nasal septum by relatively broad base.^[2] The mass in our case represented all the examination findings except for the localization.

The differential diagnosis of FP includes nasal polyposis, choanal polyp, squamous carcinoma and the other SPs. The differential diagnosis of FP from other SPs may sometimes be hard. Histopathological examination is necessary for definite diagnosis. The cell types in fungiform and inverted papilloma are the same, but the two differ in their association with carcinoma. Fungiform papilloma, unlike inverted papilloma, is not associated with carcinoma. Generally, FP has connective tissue stalks that form an exophytic architecture. In contrast, inverting papilloma has invagination of the surface epithelium into the underlying stroma. Nonetheless, some inverting papillomas have an exophytic surface in addition the invaginations.

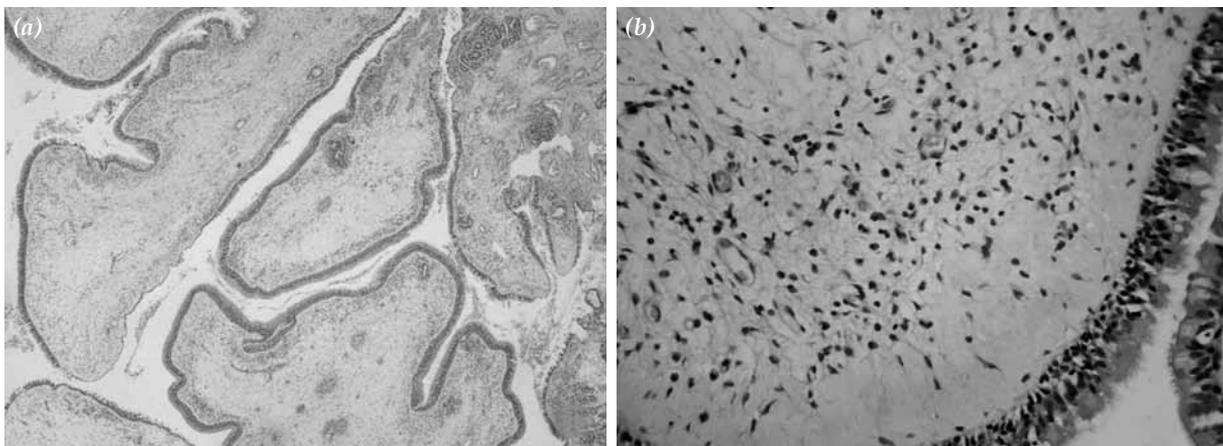


Figure 3. Histopathological view of the mass. (a) Papillomatous outgrowths surrounding with respiratory epithelium (H-E x 40). (b) Fibroblasts, lenfocytes and plasma cells in stroma (H-E x 400).

The epithelium of both FP and inverting papilloma includes squamous, ciliated columnar, intermediate, and mucus-secreting cells.^[3]

Several guiding axioms for the surgical treatment of SPs have been described. The papillomas should not be managed as totally benign lesions. The best opportunity for successful control of the papillomas is with the first surgical procedure. The more open the approach, the better the accessibility, the more complete the resection and the less chance of recurrence. A lateral rhinotomy approach is generally regarded by most surgeons as the gold standard. Indiscriminate application of lesser surgical approaches, including endoscopic surgery, may result in high recurrence rates.^[4]

Sham et al.^[9] indicate that the choice of a surgical approach for SPs should be tailored to the location and extent of the disease. They stated advantages of endoscopic surgery to include precise determination of tumor extent, preservation of normal mucosa and bony structures, and the avoidance of external scars.

In recent years, studies including the combination of surgical excision and topical via-contact application or intralesional injection of cidofovir for SPs have been done and successful results have been obtained.^[10,11]

We preferred an endoscopic approach in this case because the mass was limited to the inferior concha and the paranasal sinuses and bone were intact. Additionally, the preoperative biopsy result was FP, which has a low recurrence rate and is not associated with malignancy. No recurrence was seen for 16 months in follow-up period.

In conclusion, we reported here a patient with FP which originated from the lateral nasal wall. Such an occurrence of the FP was very rare, so the case was found to be worthy of presentation.

Fungiform papilloma should be kept in to mind in cases of unilateral nasal masses arising from lateral nasal wall.

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