

# Fibroepithelial Polyp Originating from the Nasal Septum

Marko Stoiljkov<sup>1</sup> , Aleksandar Perić<sup>2</sup> 

## Case Report

<sup>1</sup>Unit of Ear Nose Throat, General Hospital Bar, Bar, Montenegro

<sup>2</sup>Department of Otorhinolaryngology, Military Medical Academy School of Medicine, University of Defence, Belgrade, Serbia

## Abstract

Fibroepithelial polyp (FEP) is a rare clinical condition of mesodermal origin, covered usually by squamous epithelium, originating most frequently from the skin, genitourinary and lower respiratory tract. Upper airway FEP is a rare lesion found usually in the pharynx and larynx. Only three cases of FEP arising from the nasal mucosa were reported in the world literature, all from the inferior nasal turbinate.

In this paper, we describe the first case in the literature of a FEP originating from the nasal septum in a patient suffering from perennial allergic rhinitis. In addition, we discussed the etiology, pathogenesis, histopathological and clinical characteristics of FEPs.

**Keywords:** Nasal polyp, nasal septum, inflammation, mesoderm

## Introduction

Fibroepithelial polyp (FEP) is a benign lesion of mesodermal origin, lined usually by squamous epithelium (1-5). It is also known with the name "acrochordon". FEP is a relatively common cutaneous lesion of the head, neck and thorax, although this lesion can be found in the gastrointestinal, genitourinary and low respiratory system (1-3). Upper airway FEP is a rare lesion found usually in the pharynx and larynx (1-3). To our knowledge, only three cases of FEP arising from the nasal cavity have been reported in the world literature, all from the inferior turbinates (4-6). We now present the first case of FEP originating from mucosa of the nasal septum.

## Case Presentation

A 35-year-old male presented to the ENT department with one-year history of slowly progressive left-sided nasal obstruction and mucopurulent nasal secretion. He was treated with intranasal corticosteroid sprays (INCS) due to perennial allergic rhinitis, with no significant improvement. Allergies to *Der-matophagoides pteronyssinus* and fungus *Alternaria al-*

*ternata* were determined with a skin-prick test. Nasal endoscopy showed a white-pink, polypoid, lobular mass in the left nasal cavity, attached by a thin pedicle to the anterior part of the nasal septum. Computed tomography (CT) scan of the paranasal sinuses demonstrated a soft-tissue mass with dimensions 14.4 x 12.5 mm in the left nasal cavity, without any cartilaginous and bony destruction (Figure 1). After endoscopic removal, histopathological examination (Hematoxylin & Eosin), showed that the lesion was covered with metaplastic squamous epithelium with different degrees of keratinization and pseudostratified respiratory epithelium remnants on the polyp subsidences (Figure 2a). Under the epithelium, there was fibromyxoid stroma, infiltrated by numerous inflammatory cells, particularly eosinophils and lymphocytes, with large areas of adipose tissue (Figure 2b). These features were consistent with a fibroepithelial polyp. One year after the excision, there was no evidence of polyp recurrence.

## Discussion

The etiology of FEP is not known. Chronic irritation, infection, allergic reactions and errors in tis-

### ORCID IDs of the authors:

M.S. 0000-0001-7146-6067;  
A.P. 0000-0002-8453-7272.

**Cite this article as:** Stoiljkov M, Perić A. Fibroepithelial Polyp Originating from the Nasal Septum. Turk Arch Otorhinolaryngol 2019; 57(4): 206-8.

This paper has been presented as a poster at the 5<sup>th</sup> Congress of European ORL-HNS, 29 June - 03 July 2019, Brussels, Belgium.

### Corresponding Author:

Aleksandar Perić, aleksandarperic1971@gmail.com

**Received Date:** 27.10.2019

**Accepted Date:** 03.12.2019

Content of this journal is licensed under a Creative Commons Attribution 4.0 International License. Available online at [www.turkarchotolaryngol.net](http://www.turkarchotolaryngol.net)



DOI: 10.5152/tao.2019.4882

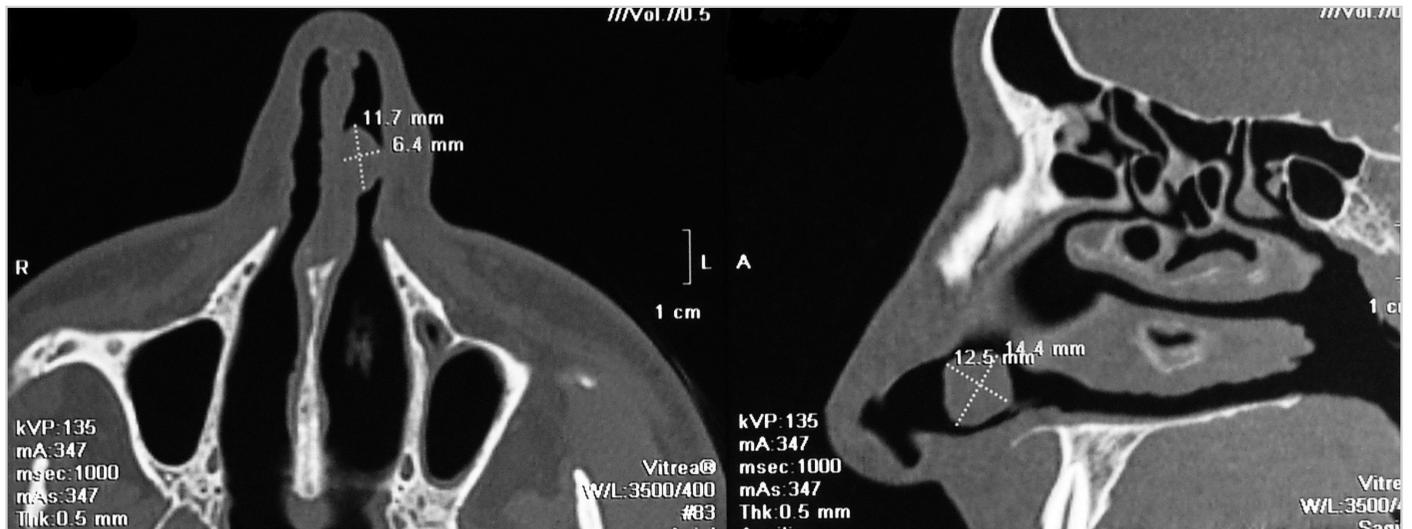


Figure 1. Axial and sagittal CT scan showing a soft-tissue opacity attached to the left side of the nasal septum.

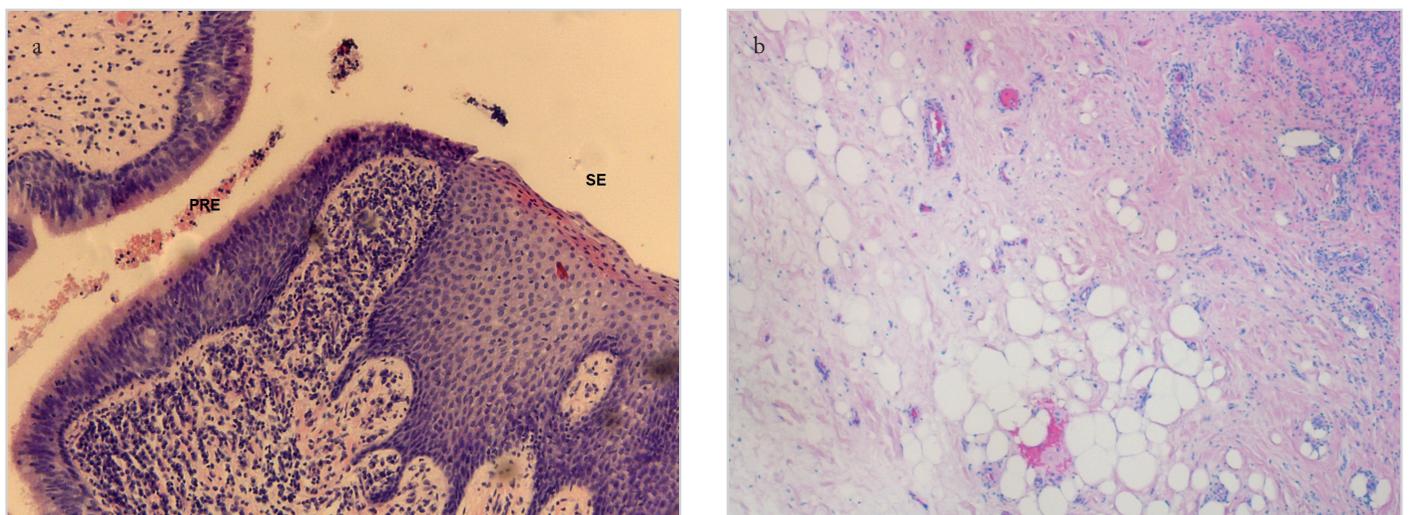


Figure 2. a, b. Microphotography of the excised mass. (a) The transition from metaplastic squamous epithelium (SE) with keratinization to ciliated pseudostratified respiratory epithelium (PRE). (b) Fibrous stroma with islands of adipose tissue. (Hematoxylin & Eosin staining x 100 magnification)

sue development have been proposed (3-6). Traditionally, FEPs have been thought to occur after mucosal trauma. Firat et al. (4) described a case of FEP originating from the inferior turbinate as a complication of superficial damages of the nasal mucosa by nasopharyngeal tube. FEP has a mixture of different tissue elements that represents a hamartoma (4-6). Tissue polymorphism is the main histological characteristic for FEPs, especially in the stroma where many different mesodermal tissues are present, including the adipose and hemangiomatic tissue (1-6). The case of an aggressive squamous cell carcinoma arising from a large FEP, pedunculated to the skin of the lower limb has also been reported (7). So, FEP requires complete excision and detailed histopathological examination.

In our patient, there was no history of mucosal trauma, but the patient noted the use of INCS for 6 months due to the left-sided nasal obstruction and diagnosis of perennial allergic rhinitis. Common local side effects of INCS use include epistaxis, nasal dryness, burning and stinging sensations (8). Rate of epistaxis has been reported to be 5% in INCS users with the side of epi-

staxis correlating with patient handedness, supporting that it is the result of the spray being directed at the septum leading to mechanical trauma from the nasal applicator tip against the septum (8). The topic "mucosal atrophy after the INCS use" raised as a result of presence of epidermal atrophy from steroid-based topical skin creams or ointments. However, the respiratory epithelium of the nasal mucosa differs from keratinizing squamous epithelium of the skin (8, 9). A recent systematic review of the literature which included 11 randomized controlled histological studies has shown no evidence of atrophy of the nasal mucosal layers after the INCS treatment (9). Although careful histological examination of tissue specimens performed by our pathologist didn't show any sign of mechanical trauma, we could not exclude the possibility that nasal septal mucosa was injured with INCS applicator tip. In our patient, fibrous and adipose tissues in the stroma were lined with metaplastic squamous epithelium and ciliated respiratory epithelium. The growth of the polypoid lesion was associated with perennial allergic rhinitis. We propose that chronic eosinophilic inflammation stimulates the production of inflammatory and growth factors, which might

have induced fibroblast and epithelium proliferation and stromal and epithelial metaplasia, resulting in a hamartomatous polypoid lesion. The differential diagnosis for FEP arising from the nasal septum would be exophytic papilloma, inflammatory nasal polyp and respiratory epithelial adenomatoid hamartoma (REAH). Exophytic papilloma is characterized by numerous branching fronds of mucosa over a fibrovascular connective tissue, covered by keratinized stratified squamous epithelium. Large cystic-filled spaces can be seen throughout the epithelium (7, 8). Inflammatory nasal polyp shows the proliferation of pseudostratified respiratory epithelium and stromal fibroblast proliferation and edema, with strong eosinophil, lymphocyte, and plasma cell tissue infiltration (10). In contrast to inflammatory nasal polyp, REAH is characterized by abnormal submucosal pseudoglandular proliferation, consisted of small-to-medium-sized, round-to-oval pseudoglands, lined with pseudostratified ciliated epithelium (10).

## Conclusion

FEPs arising from the nasal cavity structures are extremely rare benign lesions of mesodermal origin with strong tissue polymorphism as the main histological characteristic. Complete surgical excision and careful histopathological examination are necessary because of the possibility of tissue metaplasia.

**Informed Consent:** Written informed consent was obtained from the patient who participated in this study.

**Peer-review:** Externally peer-reviewed.

**Author Contributions:** Concept - M.S., A.P.; Design - M.S., A.P.; Supervision - A.P.; Materials - M.S., A.P.; Data Collection and/or Processing - M.S., A.P.; Analysis and/or Interpretation - M.S., A.P.; Literature Review - M.S., A.P.; Writing - M.S., A.P.; Critical Reviews - M.S., A.P.

**Conflict of Interest:** The authors have no conflicts of interest to declare.

**Financial Disclosure:** The authors declared that this study has received no financial support.

## References

1. Telugu RB, Ashish. Fibroepithelial polyp of the tonsil: report of a rare case. *J Clin Diagn Res* 2015; 9: 17-8. [[CrossRef](#)]
2. Cukic O, Jovanovic MB. Large fibroepithelial polyp of the palatine tonsil. *Ear Nose Throat J* 2019 Apr 18. doi: 10.1177/0145561319841203. [Epub ahead of print]. [[CrossRef](#)]
3. Farzal Z, Ulualp SO, Rakheja D. Fibroepithelial polyp of the epiglottis. *Am J Case Rep* 2014; 15: 340-2. [[CrossRef](#)]
4. Firat Y, Durgun Y, Kizilay A, Selimoğlu E. An unusual complication of nasopharyngeal tube: intranasal fibroepithelial polyp. *KBB ve BBC Dergisi* 2008; 16: 78-81.
5. Perić A, Matković-Jožin S, Vukomanović-Đurđević B. Fibroepithelial polyp arising from the inferior nasal turbinate. *J Postgrad Med* 2009; 55: 288-9. [[CrossRef](#)]
6. Nishijima H, Yagi M. Multiple fibroepithelial polyps arising from the inferior turbinate. *Otolaryngol Head Neck Surg* 2012; 146: 1031-2. [[CrossRef](#)]
7. Agir H, Sen C, Cek D. Squamous cell carcinoma arising from a fibroepithelial polyp. *Ann Plast Surg* 2005, 55: 687-8. [[CrossRef](#)]
8. Oakley GM, Harvey RJ. Topical steroids. Woodworth BA, Poetker DM, Reh DD (eds): *Rhinosinusitis with nasal polyposis. Advances in Otorhinolaryngology*. Basel, Karger, 2016; 79: 121-30. [[CrossRef](#)]
9. Verberk MM, Bhatia D, Rimmer J, Earls P, Sacks S, Harvey RJ. Intranasal steroids and the myth of mucosal atrophy: a systematic review of original histological assessments. *Am J Rhinol Allergy* 2015;29:3-18. [[CrossRef](#)]
10. Perić A, Vukomanović Đurđević B. Respiratory epithelial adenomatoid hamartoma and inflammatory nasal polyps arising from the different sides of the nasal cavity: a case report. *Erciyes Med J* 2017; 39: 146-8. [[CrossRef](#)]