



The Nasal Cavity Mass with Oropharyngeal Extension Causing Progressive Dysphagia

Hyun Jin Min¹ · Kyung Soo Kim¹

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Abstract

Although dysphagia and lump sensation in the throat caused by intranasal benign tumors with oropharyngeal extension is a rare condition, we suggest that clinicians should thoroughly examine the presence of nasal pathologies using various endoscopes for the differential diagnosis.

Keywords Sinonasal inverted papilloma · Oropharynx · Dysphagia · Lump sensation in throat

Clinical Conundrum

A 40-year-old woman presented with a 2-month history of mild dysphagia and lump sensation in the throat. Additionally, she had nasal obstruction in the right nasal cavity. The severity of symptoms had gradually increased with time. Dysphagia presented to the degree that the patient had discomfort on swallowing liquids due to the velopharyngeal reflux. She had no remarkable medical history, except for type 2 diabetes. Two years prior, she had been diagnosed with nasal polyps in the right nasal cavity at a local clinic but had refused treatment. On examination, her vital signs and systemic findings were normal. On oral cavity examination (Fig. 1), a yellowish gray, polyp-like mass extending from the nasopharynx was observed below the level of the tip of the right side of the uvula within the oropharynx. Nasal endoscopic examination revealed a reddish pink mass with a smooth surface originating from the right lateral wall (uncinate process), partially filling the right nasal cavity, nasopharynx, and hanging into the oropharynx (Fig. 2). On probing, the mass was found to be firm in consistency, with no sensitivity or bleeding on palpation. Paranasal sinus computed tomography (Fig. 3) revealed soft tissue density

involving the right-sided middle meatus, maxillary sinus, anterior ethmoid sinus, frontal sinus, choana, nasopharynx, and oropharynx. Under the provisional diagnosis of inflammatory polyps, a 6.5 × 1.3-cm-sized mass was completely removed using the transnasal endoscopic approach (Fig. 4a). The mass originated from the superior portion of the uncinate process and did not infiltrate into the neighboring structures. The sinus lesion was caused by obstruction of the natural opening due to the mass. The specimen was sent for histopathological examination (Fig. 4b). What is the diagnosis for this patient?

What is the Diagnosis?

Histopathological examination revealed an endophytic or inverted growth pattern consisting of markedly thickened squamous epithelial proliferation growing downward into the underlying connective tissue stroma, consistent with inverted papilloma. There was no evidence of dysplasia or invasive malignancy in any of the studied sections. The patient's symptoms completely alleviated after surgery, with no residual tumor or recurrence observed at the 1-year follow-up.

Discussion

SNIP is a benign epithelial tumor in which surface epithelial cells grow downward into the underlying supportive tissue. It accounts for 0.5–4% of all primary nasal tumors [1].

✉ Kyung Soo Kim
entkks@cau.ac.kr

Hyun Jin Min
jjinient@gmail.com

¹ Department of Otorhinolaryngology-Head and Neck Surgery, Chung-Ang University College of Medicine, Heukseok-dong, Dongjak-gu, Seoul 224-1, Korea

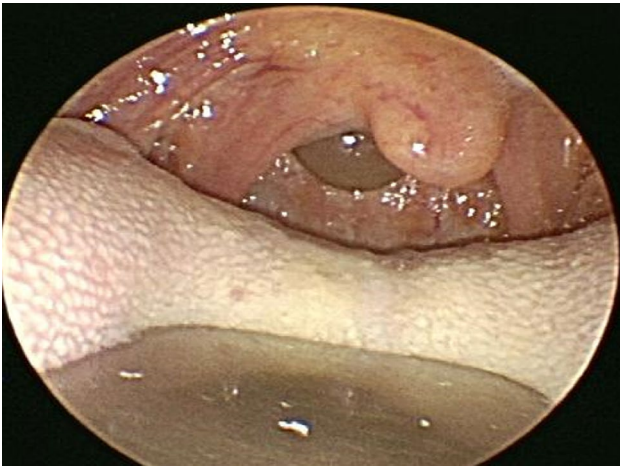


Fig. 1 An intraoral photograph showing a yellowish mass in the oropharynx hanging behind the soft palate and uvula

Characteristic findings of SNIP, differentiating it from other sinonasal tumors, include a relatively strong potential local invasiveness, high incidence of recurrence, and transformation into squamous cell carcinoma [2]. To date, the diagnosis and treatment of SNIPs have been well understood owing to the clarification of characteristic endoscopic findings, imaging findings, particularly magnetic resonance imaging features, and pathological findings [3].

Although an SNIP may originate anywhere in the nasal passage, it usually originates from the lateral nasal wall, particularly the middle meatal area, which accounts for 90% of the cases. SNIPs secondarily spread into the paranasal sinuses, with the maxillary sinus being the most commonly affected site [4]. Symptoms may vary depending on the anatomical location of SNIPs, such as unilateral nasal obstruction (chief complaint), epistaxis, rhinorrhea, facial discomfort, and headache [5, 6]. Similar to our case, patients with an SNIP may rarely present with atypical symptoms, including dysphagia, lump sensation in the throat, and hoarseness, depending on the extent and size of extension in the oropharynx [6]. However, thus far, no studies have reported on the oropharyngeal extension of SNIPs. To review the entire available English-language literature, we searched the MEDLINE database and PubMed using the key words “sinonasal inverted papilloma”, “Schneiderian papilloma”, “inverted papilloma”, “oropharynx”, and “extension”. We found and thoroughly reviewed five case reports relevant to our search in addition to the present patient (total six patients) [6–10]. We reviewed these

patients focusing on the age/sex, side, symptoms, duration, origin, extent, and treatment (Table 1). The mean age was 55.8 years, ranging from 40 to 83 years. The included patients were five male and one female patient, with a male-to-female ratio of 5:1. All patients had a unilateral lesion with no side preponderance. Of all presenting symptoms, the most common one was nasal obstruction, seen in all patients. Symptom duration ranged from 1 month to 2.5 years. Four patients presented with atypical symptoms, such as dysphagia and lump sensation in the throat. Tumor origin was described only in four cases: lateral nasal wall in two patients, superior turbinate in one patient, and nasal septum in one patient. The tumor extended to the oropharynx in three patients and to the larynx in three patients. The most common treatment strategy, which was used in five patients, was complete removal with the endoscopic approach. In the remaining patient, complete removal using the Caldwell–Luc approach was performed. Surgical treatment of SNIPs still poses many challenges; however, recently, endoscopic sinus surgery has shown a good surgical outcome with advancements in endoscopic technologies and techniques.

Differential diagnoses to be considered in SNIPs extending to the oropharynx are as follows: antrochoanal polyp, inflammatory polyp, angiofibroma, and encephalocele and malignant neoplasms, such as epidermoid carcinoma or adenocarcinoma [11]. Among them, nasal polyps (antrochoanal and inflammatory polyps) must be considered as the main differential diagnosis. Nasal polyps, more frequently than SNIPs, present as a single, unilateral, nasal mass extending to the nasopharynx and oropharynx. It is not difficult to diagnose SNIPs because of their endoscopically characteristic findings, i.e., they appear as irregular polypoid masses of variable consistency, are pink in color, and have bleeding tendency. However, our provisional diagnosis was inflammatory polyp because our patient had a reddish pink mass with a smooth surface, unlike the previously reported cases of SNIPs.

In conclusion, our case is the sixth reported case in the literature involving an SNIP originating from the lateral wall, extending inferiorly to the oropharynx, and presenting with atypical symptoms such as dysphagia and lump sensation in the throat. Clinicians should keep in mind that dysphagia and lump sensation in the throat may be caused by benign nasal tumors, particularly SNIPs. Accordingly, clinicians should examine patients for nasal pathologies using various endoscopes.

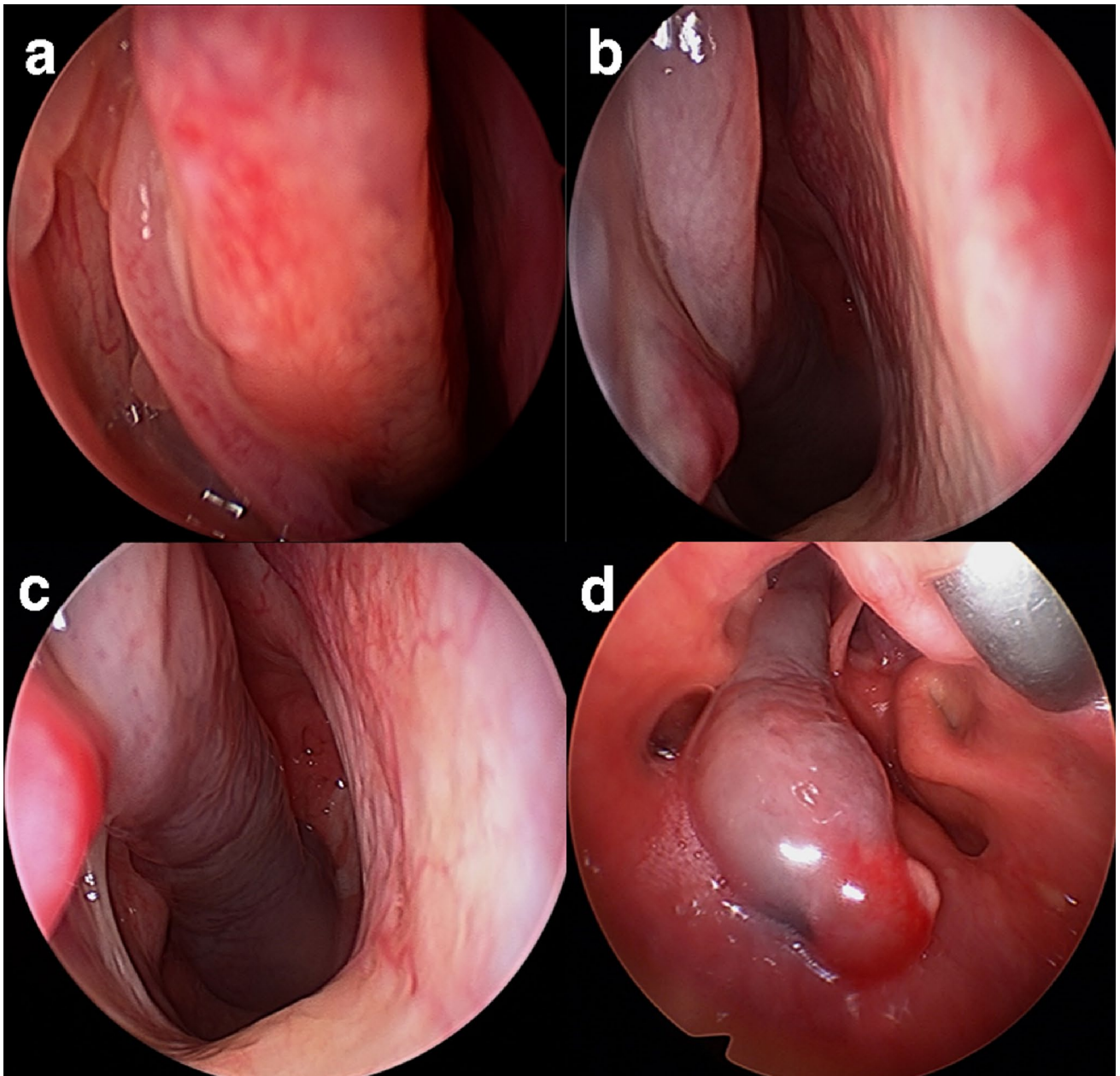


Fig. 2 Nasal endoscopic examination reveals a reddish pink mass with a smooth surface originating from the right lateral wall **a**, partially filling the right side of the nasal cavity **b**, nasopharynx **c**, and hanging into the oropharynx (**d**, retrovelar view with a 70° endoscope)

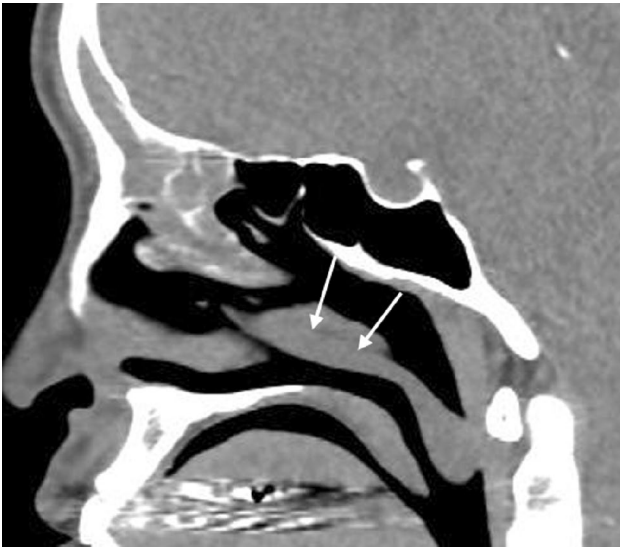


Fig. 3 The paranasal sinus in the sagittal view shows soft tissue density involving the right-sided middle meatus, maxillary sinus, anterior ethmoid sinus, frontal sinus, choana, nasopharynx, and oropharynx (white arrow: tumor margin)

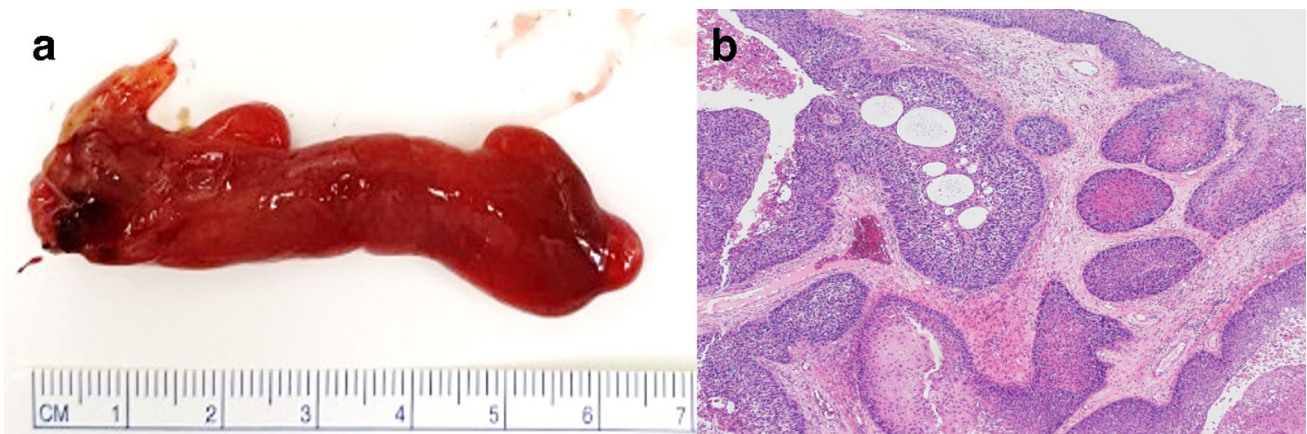


Fig. 4 a A 6.5×1.3-cm-sized mass has been completely removed using the transnasal endoscopic approach. **b** Histopathological examination shows an endophytic or inverted growth pattern consisting of

markedly thickened squamous epithelial proliferation growing downward into the underlying connective tissue stroma

Table 1 Previously reported 5 cases of sinonasal inverted papilloma with the extension beyond the oropharynx including the present case with current literature review

Author (year)	Age	Sex	Side	Symptoms	Duration	Extent	Treatment
Atan [6] (2017)	61	M	Left	dysphagia, lump sensation in throat, nasal obstruction, headache	6 months	nasal cavity (superior turbinate) ~ epiglottis (13 cm in length)	Endoscopic approach
Kamath [7] (2015)	54	M	Right	nasal obstruction, rhinorrhea	2.5 years	nasal cavity ~ oropharynx	Endoscopic approach
Hathiram [8] (1999)	57	M	Left	dysphagia, sore throat, nasal obstruction	1 month	nasal cavity (lateral nasal wall) ~ epiglottis (14 cm in length)	Endoscopic approach
Cardoso [9] (2017)	40	M	Right	dysphagia, dyspnea, nasal obstruction, nasal discharge	4 months	nasal cavity ~ laryngopharynx	Caldwell-Luc approach
Parida [10] (2009)	83	M	Left	nasal obstruction, known nasal mass	2 years	nasal cavity (nasal septum) ~ oropharynx	Endoscopic approach
The present case	40	F	Right	dysphagia, lump sensation in throat, nasal obstruction	2 months	nasal cavity (lateral nasal wall) ~ oropharynx (6.5 cm in length)	Endoscopic approach

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Compliance with Ethical Standards

Conflict of interest The authors have no conflicts of interest.

Confirmation of Patient's Permission The patient's permission was obtained.

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Hyun Jin Min MD, PhD

Kyung Soo Kim MD, PhD