

## Sphenchoanal Polyp: A Case Report with a Rare Mimicking Entity

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### Abstract

Sphenchoanal polyp (SCP) are rare entities sharing similar symptoms to ethmoidal and antrochoanal polyp and therefore likely to get confused. Diagnosis is based on the clinical and radiological parameters. Using nasal endoscopy to identify the sphencho-ethmoidal recess with stalk of the polyp passing through and imaging (CT/MRI) to look for sphenoid opacity, widened sphencho-ethmoidal recess and a clear maxillary sinus, are the reliable parameters favouring SCP. Proper identification of SCP will not only allow us to avoid unnecessary exploration and reduce complications but also provide a complete clearance thereby reducing the recurrence rates.

**Keywords:** Sphenchoanal Polyp; Sphencho-ethmoidal Recess; Functional Endoscopic Sinus Surgery; Computed Tomography

### Introduction

An isolated polyp originating from the sphenoid sinus (anterior wall or interior) and extending as choanal polyp in to the nasopharynx are extremely rare clinical entities [1]. SCP has three different parts i.e., intrasinusoidal, ostial and extrasinusoidal [2]. Sphenoid sinus disease often has an insidious onset with nonspecific symptoms [1,3]. In the late cases, they can present with nasal obstruction and headache and sinusitis [1]. Nasal endoscopy serves as an essential diagnostic tool while computed tomography (CT)/magnetic resonance imaging (MRI) of paranasal sinuses (PNS) is the conclusive investigation for confirming the diagnosis and planning surgical treatment [1]. Endoscopic sinus surgery (FESS) is the widely accepted surgical modality for SCP [1,4].

### Case Report

We came across a 12 year asymptomatic female child in Otolaryngology Clinicon June 7, 2014 with a right sided nasal mass incidentally seen by her mother while the child was asleep. Nasal endoscopy revealed a solitary polyp occupying the right nasal cavity which was extending upto the choana. Contrast enhanced CT of the nose and PNS showed a right sided solitary nasal mass arising

from the sphenoid sinus with a widened sphencho-ethmoidal recess as shown in figure 1. Through the recess, mass was seen extending posteriorly upto the choana, contralateral side and anteriorly filling the right nasal cavity. We planned for an endoscopic sinus surgery (Sphenoidotomy and Clearance) wherein stalk of the polyp was first removed followed by delivery of the main bulk through the oral cavity.



**Figure 1:** CECT Scan of Nose, Paranasal sinus (Sagittal, Coronal and Axial sections).

The post-operative labelled picture of removed polyp is shown below in figure 2.

**Figure 2:** Postoperative polyp with the labelled parts.

The histopathology was reported as a benign inflammatory polyp. At six months follow up, child was asymptomatic and a repeat nasal endoscopy was normal.

### Discussion

Nasal polyps usually arise from the maxillary sinus; however, an unusual origin such as sphenoid has occasionally been reported [2,5]. As with our case report shown in figure 1, the polyp originated from the sphenoid sinus, extended via the widened sphenothmoidal recess to reach the ipsilateral as well as contralateral choana and also towards the nasal cavity. The sphenoid polyp usually presents before 40 years of age with a major percentage in the adolescent and young adults [6]. We also came across a 12 year old adolescent girl with SCP as similarly reported by Vuysere, *et al.* (2001). Lim and Sdralis hypothesized that SCP are inflammatory in origin and most are small and asymptomatic, although polyps enlarge over a few years because of persistent infection and may eventually become symptomatic [7]. Cook, *et al.* (1993) proposed that chronic sinusitis and chronic obstruction of the sinus ostia, as well as allergy have a role to play in the development of choanal polyps but which was not evident with our case [8].

SCP may be confusing at times especially for the young ENT surgeons [4]. Nasal endoscopy provides a clear view of the sphenothmoidal recess and postnasal space. Bist, *et al.* (2007) reported that the definitive diagnosis can be made by the identification of the sinus ostium from which the stalk of the polyp pass through [1]. A routinely performed CT scan of the nose and paranasal sinuses as in our case showing an opaque sphenoid sinus and choana, a widened sphenoid ostium with a clear maxillary sinus is likely to be SCP as reported by Acharya, *et al.* (2010) and Lim

and Sdralis (2004) [4,7]. The cornerstone of management of SCP is an endoscopic guided surgical clearance (FESS) because simple polypectomy leaves some part of the polyp inside the sphenoid sinus carrying a high risk of recurrence as reported by Ceylan, *et al.* (2006) and Acharya, *et al.* (2010) [4,9]. Operative complications of endoscopic sphenoid surgery are rare, but surgeons must be aware of the close critical anatomical structures surrounding the sphenoid sinus such as the internal carotid artery, optic nerve, dura mater, cranial nerves III to VI and cavernous sinus [4]. There were no postoperative complications in our case.

### Conclusions

SCP is a rare choanal polyp usually occurring in the adolescent age groups presenting with similar symptoms to antochoanal polyp. But they can be differentiated with the help of clinical (nasal endoscopy) and radiological (CT/MRI) modalities. A proper diagnosis, careful plan and safe endoscopic surgery of SCP can avoid unnecessary sinus explorations and complications.

### Disclosure of Conflicts of Interests

"I, Suman Thapa declare that there is no conflict of interest regarding the publication of this paper".

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