# Sphenochoanal Polyp, A Case Report

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## Abstract:

Objectives were to post a case of sphenochoanal polyp and to discuss its diagnosis and treatment. Single nasal polyp presenting at the choana are a common entity in ENT practice. Since they usually arise from the Antrum of Highmore ( Maxillary sinus) and grow towards choana they are known as antrochoanal polyp . Choanal polyp arising from the sphenoid sinus and presenting at the choana are rare. These are known as sphenochoanal polyp. It is imperative that we differentiate between the two polyps for two reasons, firstly to give a complete disease clearance and secondly to prevent unnecessary surgery for other sinuses that are not involved. Radiological investigations include a C.T.Scan of paranasal Sinuses or a M.R.I. This will help in differentiating the sphenochoanal polyp from an antrochoanal polyp. Diagnostic nasal endoscopy will confirm the diagnosis. Once the diagnosis is made surgical removal must be done. This case is presented here because of its rarity and also to stress the use of endoscopes in diagnosis and surgical management of nasal polyps.

**Key-Words:** nasal polyp, antrochoanal polyp, sphenochoanal polyp, nasal endoscopy

SMAMC Journal, 2020; 6(1):41-44

## Introduction:

A choanal polyp is a benign mass originating from oedematous and inflamed mucosa of paranasal sinuses, passing through the sinus ostium, located within nasal cavity and extending to nasopharynx with a wide pedicle. According to the paranasal sinus of origin, those arising in the maxillary sinus are known as antrochonal, those arising from the sphenoid sinus as sphenochonal and those from ethmoid sinus known as ethmochonal polyp[1]. The cause of unilateral nasal obstruction with polyp presenting in choana has been accepted universally as antrochoanal polyp or Killians polyp. In today's world of endoscopes more and more newer diagnosis are coming to light because of regular and increasing use of nasal endoscopy in the field of diagnosis [2]. One such entity is sphenochoanal polyp [3]. According to Dadas 4 to 6% of all nasal polyp are Antro-Choanal polyp [4]. Spheno-Choanal Polyp and other polyp are rare. [5]

## Case report:

A Thirteen year old girl presented to our OPD with history of nasal obstruction for one year which is gradually increasing in nature. Patient stated that she felt more nasal obstruction during expiration than inspiration. It was persistent progressive nasal obstruction not relieved with medication. It slowly progressed in such a way that the patient was suffering from bilateral nasal block by the time he presented to us for treatment.

On examination:

External contour of nose was normal, anterior rhinoscopy revealed a solitary, pale, greyish- white glistening polypoidal lesion in the left nasal cavity. This was insensitive to touch and didn't bleed on touch and the probe could be passed all around it.

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Post Nasal Examination showed the same polyp occupying both choanae.

Investigations

C.T. Paranasal Sinuses revealed no opacity in maxillary Sinuses. Left Sphenoid Sinus showed more haziness than the right. Soft tissue density was seen in right Spheno-Ethmoid Recess and nasal cavity, extending up to the choana. The soft tissue was seen in both choanae.

Diagnostic Nasal Endoscopy revealed that the polyp was arising from the floor of the Sphenoid Sinus. The ostium was widened. The Middle Meatus was normal

Other Blood and Urine investigations, X ray Chest and E.C.G. were within normal limits.

**Figure-1:** Axial image shows Sphenochoanal polyp.

Patients underwent Endoscopic polypectomy under general anaesthesia. Since the Sphenoid Sinus is related to important structures like the Carotids, Cavernous Sinus and the Optic Nerves, great caution has to be exercised. Since in our patients the polyp was attached to the floor, we courageously avulsed the polyp and removed the polyp with its attachment.

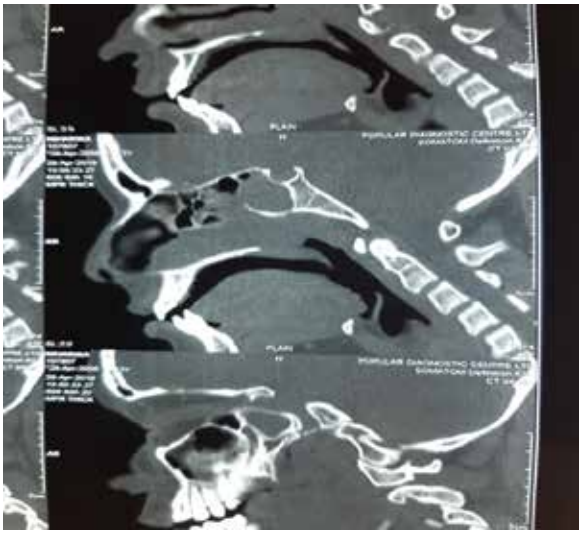

**Figure-2:** Coronal CT image showing Sphenochoanal polyp.

**Figure-3:** CT paranasal sinuses coronal section showing the nasal component of the mass.

**Figure-4:** Endoscopic view of the nasal cavity

The three segments i.e. the sinus part, the spheno-ethmoidal recess part and the choanal part were removed enmasse. The ostium was widened.
Post operative period was uneventful

**Figure-5:** Picture showing resected specimen

## Discussion:

Sphenochoanal polyps originate from the sphenoid sinus and present with nasal obstruction[6]. They are rare compared to the antrochoanal polyp. C.T. Para nasal Sinuses and diagnostic nasal endoscopy are the ideal ways to differentiate between the two polyps [7]. Surgery is the main stay of treatment[3].

Nasal Polyps form one of the common differential diagnoses for nasal obstruction .Other differential diagnosis may include meningoencephalocele, angiofibroma, and inverted papilloma.

Meningoencephalocele should be excluded in a very small child, Juvenile Angiofibroma in a young adolescent male with nasal block, epistaxis and inverted Papilloma in a middle aged individual [8]. But the main differentiation has to be made between an antrochoanal polyp and a sphenochoanal polyp.

Polypi presenting at the choanae usually arise from the maxillary sinus and such polypi with unilateral nasal obstruction are known as Antro-Choanal polypi. Solitary Polypi are also known to arise from the Sphenoid Sinus. These are not so common[9]. When such polypi present at the choanae they are called as Spheno-Choanal polyp. Polypi arising from the ethmoid sinuses are usually multiple and they are usually seen more anteriorly. Though such polypi may present at the choana, such presentation is extremely rare.

A spheno-choanal polyp arises from the sphenoid sinus, comes out through the sphenoid ostium goes through the spheno-ethmoid recess to present into the nasal choana. Such a polyp is solitary, usually unilateral and is not usually associated with allergy[1].

Histology is similar to other nasal polypi i.e. cystic centre surrounded with edematous respiratory epithelium [10,11]. Histopathological Examination (H.P.E.) is mainly to differentiate spheno-choanal polyp from meningocele, angiofibroma, and inverted papilloma.

C.T. Paranasal sinuses give a clear cut diagnosis in most cases [12, 13]. Maxillary Sinus is free, middle meatus is also free and there is no widening of the maxillary ostium. Sphenoid sinus, the spheno-ethmoid recess show opacity and sphenoid ostium is widened. Polyp is seen in the choana. Confirmation is achieved by doing a Diagnostic Nasal Endoscopy .This will show the site of origin of polyp[14], polyp exiting through the sphenoid ostium, its course and presentation at the choana.

Endoscope was used for surgery; the advantage is that the polyp and its attachment can be clearly visualized. Since the sphenoid sinus is in close proximity to important structures, precise surgery can be done and a complete disease clearance can be done with safety [15].

## Conclusion:

The foremost cause for nasal obstruction with a choanal polyp is an antro choanal polyp. It has to be differentiated from other conditions like Sino-nasal ethmoidal polypi, angio-fibroma and inverted papilloma. But the most important differential diagnosis is a spheno-choanal polyp. Both these polypi present with the same symptoms i.e. nasal block, mouth-breathing,

snoring and signs of sinusitis. Usually there is no history of allergy. H.P.E is also shows the same picture because both arise from the respiratory epithelium. Antrochoanal polyp is quite common. On the other hand a Spheno-Choanal Polyp is rare. Management of both polypi is surgery. CT- paranasal sinuses will give clear picture whether it is a sphenochoanal polyp or antrochoanal polyp which can be confirmed by doing diagnostic nasal endoscopy. Differentiation between the two is very important so as to prevent abnormalities in facial growth due to unnecessary radical surgery on the maxillary sinus especially in a growing individual.

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