

Choanal Polyps of Unusual Presentation -A Series of 4 Cases

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Abstract

Choanal polyps are the solitary benign tumours that originate from the sinus or nasal mucosa projecting into the nasal cavity and even up to the oropharynx. The exact aetiology of choanal polyps is unknown. Several theories have been formulated in the past years to describe the aetiology of choanal polyps. It is more commonly seen in young age patients. In young patients with a history of unilateral progressive nasal obstruction, it is always necessary to rule out choanal polyp. Although antrochoanal polyps are the most common, it is not a rule. Choanal polyp can also originate from sphenoid sinus and ethmoidal sinus, nasal septum and lateral wall of nose. Rare cases of these presentations are also reported. Endoscopy assisted surgery is the treatment of choice. Endoscopy can also be used as a diagnostic guide when CT scan findings are inconclusive in differentiating antrochoanal and sphenchoanal polyp. One must also keep in mind the other possible differential diagnosis.

Index terms—

1 I. Introduction II. Aims and Objectives

To identify and study about choanal polyps of unusual origin and their management and to review with relevant available literature and studies.

2 III. Materials and Methods

To record all patients presenting to the department of ENT RG Kar Medical college hospital with different types of nasal polyposis from 1/08/2013 to 1/06/2014 and taking into consideration, confirmed cases of choanal polyposis of unusual presentations. Cases of usual presentations like AFRS, pan polyposis, bilateral ethmoidal polyposis were excluded from the study. After taking the informed consent, history and clinical findings were recorded and diagnostic nasal endoscopy and CT scan of nose and PNS were done. Pre-operative and post-operative endoscopy was done and recorded for future follow up and further study. All surgically excised polypoidal mass were sent for histopathological examination. After surgery patients were discharged from ward on day 5, and were regularly followed up after 15 days, 1 month, 3 months, 6 months and 1 year.

3 IV. Results

originate from the sinus or nasal mucosa projecting into the nasal cavity, choana and even up to the oropharynx. The exact aetiology of choanal polyps is unknown. Several theories have been formulated in the past years to describe the aetiology of choanal polyps. It is more commonly seen in young age patients. In young patients with a history of unilateral progressive nasal obstruction, it is always necessary to rule out choanal polyp. Although antrochoanal polyps are the most common, it is not a rule. Choanal polyp can also originate from sphenoid sinus and ethmoidal sinus, nasal septum and lateral wall of nose. Rare cases of these presentations are also reported. Endoscopy assisted surgery is the treatment of choice. Endoscopy can also be used as a diagnostic guide when CT scan findings are inconclusive in differentiating antrochoanal and sphenchoanal polyp. One must also keep in mind the other possible differential diagnosis.

hoanal polyps are the solitary benign tumours that originate from the sinus or nasal mucosa projecting into the nasal cavity, choana and even up to the oropharynx. Most common presentation is choanal polyp originating from maxillary antrum 1 . Sphenchoanal, ethmoidchoanal, septochoanal polyps are uncommon. The exact aetiology of choanal polyps is unknown. Several theories have been formulated in the past years to describe the aetiology of choanal polyps. It is more commonly seen in young age patients. When a young patient is presenting with complaints of unilateral nasal obstruction or hawking sensation we should have a high suspicion about Sino nasal polyposis. Diagnostic nasal endoscopy (DNE) and radiological study should be carried out followed by endoscopic sinus surgery forms the protocol of management for choanal polyps.

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One among the 4 patients in the study was female and other 3 were male. Age limit of the patients were from 17 years to 38 years. Nasal obstruction was the most common complaint in all the 5 patients. In all patients diagnostic nasal endoscopy and CT scan were done. The most common clinical presentation in all patients was nasal obstruction followed by hawking sensation, anosmia and mouth breathing. The clinical presentation with relevant history, management and follow up illustrated in table 1. V. Review of Literature

The majority (100%) of the patients with choanal polyp in our study presented with nasal obstruction, followed by snoring, sleeping with the mouth open (25.0%), and nasal discharge (50%), epistaxis (25%). Association of epistaxis can be very well related with the rhinosporidiosis.

Kizil et al in his study about choanal polyposis, analysed and summarised that Choanal polyps are unilateral benign masses usually originating from paranasal sinuses. Maxillary, ethmoid, and sphenoid sinuses are involved in order of decreasing frequency. A total of 98 patients with a mean age 24.3 years were analyzed. Histopathologic diagnoses were CP in 94 patients and inverted papilloma in 4 patients. The sites of origin were maxillary sinus in 89 patients (90.8%), sphenoid sinus in 6 patients (6.1%), bulla ethmoidalis, inferior concha, and uncinate process in 1 patient each (1.0%) 2 . The most common symptoms were nasal obstruction (98.0%) and postnasal drip (30.6%). Thus hereby from the various literatures we can conclude that choanal polyps most common presentation is nasal obstruction and choanal polyps of sphenoid and lateral wall of nose are very rare. 17 year old male patient the polyp was seen arising from the sphenoidal ostium and entering into choana causing obstructive symptoms to the patient. FESS was done and specimen was sent for histopathological study. And the report was nasal polyposis. It is a very rare presentation with very few literatures available worldwide 3 . (figure ??) Figure 1 : Sphenchoanal polyp

Dual pathology of nasal polyposis and rhinosporidiosis from the same patient is a very rare scenario not reported in literature. The young male patient 27 years old had complaints of nasal obstruction on DNE polypoidal mucosa was arising from the nasal septum and was filling the choana. The choanal part of the polyp was found to have rhinosporidium embedded. The mass was carefully excised. The excised mass was clearly labelled as macroscopically it contained to different tissue and the reports were turned out to be specimen labelled as strawberry like growth in the choana was rhinosporidiosis and the specimen labelled as stalk of the polyp was found to be polypoidal mass, hence confirming the macroscopical finding (figure ??). Earlier rhinosporidiosis presenting as a urethral polyp has been reported 4 .

5 Figure 2 : Rhinosporidiosis as a polyp

The young male 23 years old was found to have a polypoidal mass seen arising from the lateral wall of nose. It consisted of two stalks both were found attached to the inferior turbinate. The mass was found extending along the floor of nasal cavity and presenting as choanal polyp from lateral wall of nose. Choanal polyps arising from the lateral wall of nose is very rare. Very few cases have been reported world-wide.

The female patient 38 years old found to have a polypoidal mass arising from the septum and the mass was found entering into nasopharynx. The mass was excised along with the muco periosteal layer of the bony septum where the stalk was attached and sent for HPE. (Figure 3) The reports turned out to be respiratory epithelial hamartoma. These benign tumours will usually mimic polyps. Proper histopathological study is necessary to rule out the diagnosis. Immunohistochemistry studies were done to confirm the diagnosis. The etiology of respiratory epithelial adenomatoid hamartoma (REAH) is unknown although inflammation may induce gland proliferation observed in hamartomas. One of our cases was associated with nasal polyposis. REAH is a self-limiting disease, so it is important to differentiate REAH from other pathologic process, including inverted papilloma and low-grade adenocarcinoma. The treatment of choice is complete excision through a conservative approach 5 . REAH is one among the rare presentation of choanal polyps. Proper histopathological differentiation is very necessary.

The main differential diagnosis is the antochoanal polyp. These polyps are more common compared to polyps from sphenoids or ethmoids. With the help of CT scan it is very easy to establish the diagnosis of polyp, whether it originates from maxillary antrum or sphenoid or from the ethmoidal air cells 6 . Even if we are seeing opacification of both maxillary and sphenoidal sinuses in the CT scan, diagnostic nasal endoscopy will be very clearly describing the polyp where it is from either maxillary antrum or from the Ilia K et al in their retrospective analysis of surgical approach for choanal polyps have proved that there is no significant difference in outcome in open procedures and endoscopic procedures. they have also finalised that Endoscopic approach is a safe and effective procedure for choanal polyp treatment. There was no significant difference between the success rates

of the endoscopic approach and combined approach. Hence Endoscopic procedures can be said as the treatment modality of choice in choanal polyposis 7 .

The other common differential diagnosis that we have to keep in mind is meningoencephalocele, nasal angiofibroma and inverted papilloma. Meningoencephalocele can be diagnosed as they present with imperfection of the skull base and may be having communication between nasal cavity and cerebral cortex. It can be confirmed by radiological study and diagnostic nasal endoscopy 8 . Angiofibromas will usually present with recurrent epistaxis. Inverted papilloma will be usually presenting in old age patients.

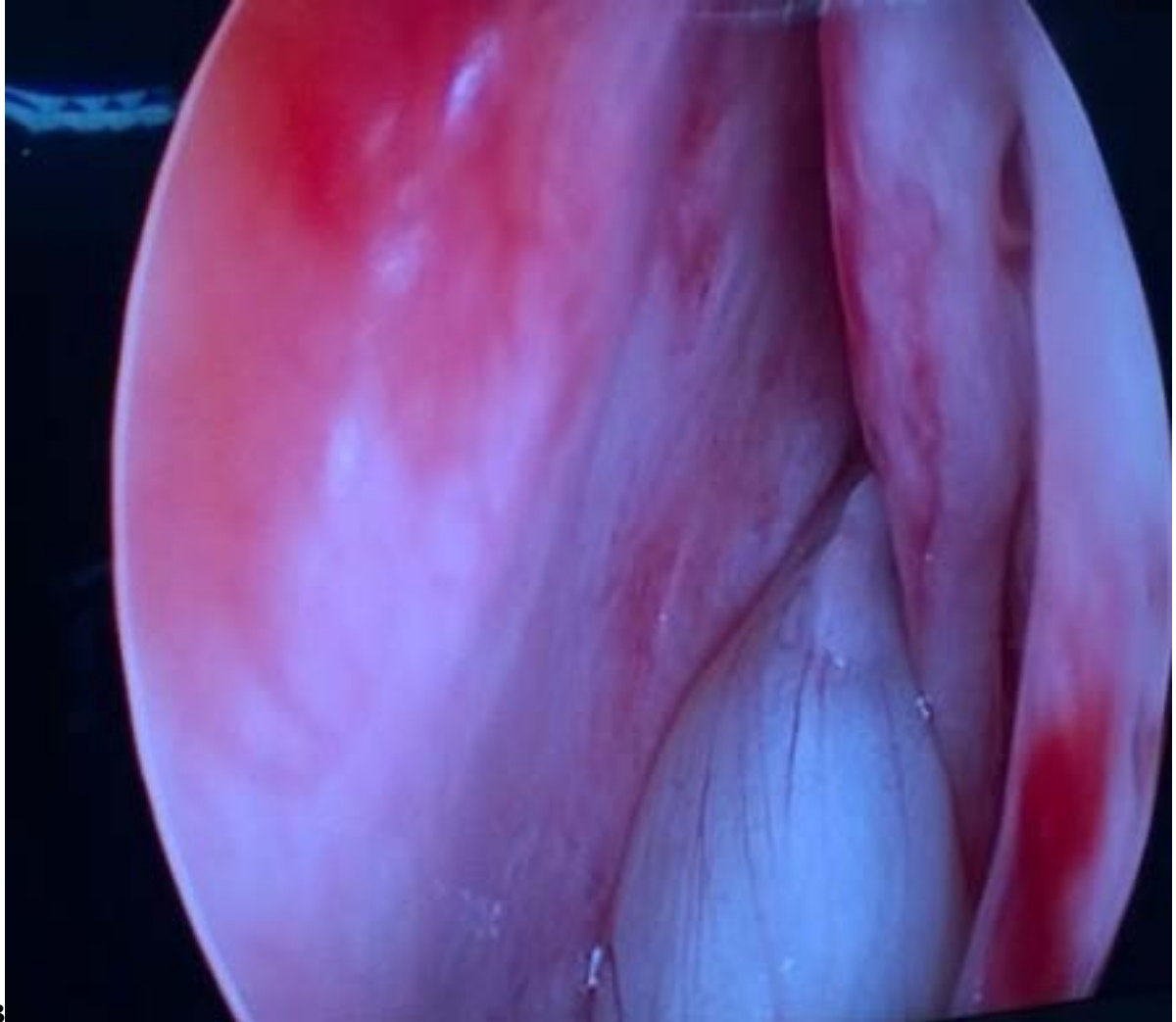
Thus points of interest to be noted from this study are (1) nasal polyposis of unusual presentation and rare pathology has to be evaluated properly. (2) Though radiological study is done in all patients it is of prime importance to go for Diagnostic nasal endoscopy before planning for surgery. (3) Endoscopic sinus surgery is the treatment of choice with least morbidity and no recurrence (4) macroscopically if we are suspecting some unusual entities as listed above should be properly labelled and sent clearly for proper histopathological confirmation.

6 VI. Conclusion

In young patients with a history of unilateral progressive nasal obstruction, it is always necessary to rule out choanal polyp. Although antrochoanal polyps are the most common, it is not a rule. Choanal polyp can also originate from sphenoid sinus and ethmoidal sinus, nasal septum and lateral wall of nose. Rare cases of these presentations are also reported. Endoscopy assisted surgery is the treatment of choice. Endoscopy can also be used as a diagnostic guide when CT scan findings are inconclusive in differentiating antrochoanal and sphenchoanal polyp. One must also keep in mind the other possible differential diagnosis.



Figure 1:



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Figure 2: Figure 3 :

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S.No	Age/Clinical Sex presentation	DNE	CT Scan	Surgical procedure	Histopathology	Follow up
Case 1	27/ M Nasal obstruction	Polypoid al mass	Septochoa nal polyp	Endoscopy assisted	Nasal part was polypoidal, choanal	15 days, 3months, 6 months, 1 year - no recur- rence
	Mouth breathing	arising from nasal		polypectomy with excision of mucoperiosteal layer	part was rhinosporidiosis (dual pathology)	
Case 23/	M Nasal obstruction	Polypoid al mass	Polypoidal mass from	Endoscopy assisted polyp	Nasal in- flammatory polyposis	15 days, 3months, 6 months, 1 year - no recur- rence
		arising from the inferior turbinate	the lateral wall of nose filling the choana	excision with cauterization of stalk		
Case 38/	F Hawking sensation	Polypoid al mass	Polypoidal irregular	Endoscopy assisted	Respiratory epithelial	15 days, 3months, 6 months, 1 year - no recur- rence
	Epistaxis 1 episode	from the septum entering into choana	mass filling the choana	polypectomy with excision of mucoperiosteal layer	hamartoma	
Case 17/	M Nasal obstruction, hawking sensation, mouth breathing	Polypoid al mass from the sphenoid al ostium filling the choana	Polypoidal mass site of origin mostly sphenoidal air cell filling whole choana	Endoscopy assisted polypectomy with widening of sphenoid ostium	Nasal in- flammatory polyposis	15 days, 3months, 6 months, 1 year - no recur- rence

Figure 3: Table 1 :

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