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Bilateral Sphenochoanal Polyposis: A Rare Case Report

KEYWORDS: choanal polyp, nasal obstruction, sphenoid sinus, endoscopic sinus surgery.

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ABSTRACT *Isolated polyp arising from any of the sinus and extending into the nasopharynx is called a choanal polyp. When the polyp arises from the sphenoid sinus and extends into the nasopharynx it is called sphenochonal polyp. Exact aetiology is not known. Incidence of sphnochoanal polyp is far less than usual antrochoanal polyp. Both of them have same clinical features. Adequate preoperative evaluation, by proper clinical examination, nasal endoscopy and computerised tomography scan is necessary for correct diagnosis and planning appropriate surgical procedure. Main treatment of sphenochoanal polyp is endoscopic sinus surgery. This case report describes a patient presenting with bilateral sphenochoanal polyposis, management and follow up.*

CASE REPORT: A 17 year old male patient came to our OP with chief complaints of bilateral nasal obstruction of 6 months duration. Nasal obstruction insidious onset, initially on right side later progressed to left side. H/O headache and recurrent attacks of cold present. Bilateral nasal discharge present. H/O snoring present. There is no history suggestive of allergy. No h/o asthma, epilepsy or trauma or epistaxis.

On examination external appearance of nose is normal. Nasal septum is in midline. Nasal cavity is filled with mucoid discharge on both sides. There is smooth, pale white, pedunculated single mass seen occupying posterior part of nasal cavity on right side. No paranasal sinus tenderness noted. Posterior rhinoscopy revealed smooth, pale white glistening mass occupying the nasopharynx obscuring the choana on both sides.

Hematological evaluation normal. CT scan revealed iso to hyper dense mass lesion seen arising from both sphenoidal sinuses, with oblique intersinus septum dividing the sinuses. On contrast administration, there is evidence of thinning of walls of the sphenoid sinus on both sides suggesting chronic inflammatory process. A polypoidal mass arising from small right sphenoid sinus, extending inferiorly into the nasopahrynx, occupying total nasopharynx. Left sphenoid sinus is large and a small polyp is just seen hanging down over the roof of the choana. Haziness of posterior ethmoidal sinuses is seen on both sides. Maxillary, frontal and anterior ethmoid sinuses on both sides are normal.

Fig.1. CT para nasal sinuses coronal view

Fig 2. CT-PNS coronal view(with contrast)

Diagnostic nasal endoscopy revealed, a smooth, pale white glistening, polypoidal mass that is insensitive to touch and not bleeding on touch seen occupying the posterior part of the nasal cavity on right side, seen arising medial to middle turbinate and extending down into choana. The polyp is also seen through the left choana. Left side there is a small smooth single polyp seen arising medial to middle turbinate extending down into the upper part of choana. Middle meatus on both sides is normal. Diagnosis is bilateral sphenochoanal polyposis. Important clinical differential diagnosis is antrochoanal polyp, benign tumor of nose, nasopharyngeal angiofibroma, adenoid hypertrophy. Planned for endoscopic sinus surgery under general anesthesia. High risk consent taken and patient was counseled accordingly.

Under general anaesthesia, preoperative decongestion of the nasal cavity is done with lignocaine and adrenaline packing for local vasoconstriction. Middle turbinate, superior turbinate and upper part of nasal septum infiltrated with lignocaine with 1:100000 adrenaline. On endoscopy polyp is seen arising from right sphenoidal osteum. Pedicle of the polyp is resected and specimen removed. Sphenoidal ostium was enlarged in medial and inferior directions, the polyp is taking origin from floor of the sphnoid sinus. Similarly polyp from left sphenoid is also removed; diseased

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mucosa from sinus is removed. Fungal debris are removed from the sphenoid sinus and sent for culture. Nasal cavity packed with soframycin gauze for 24 hours.

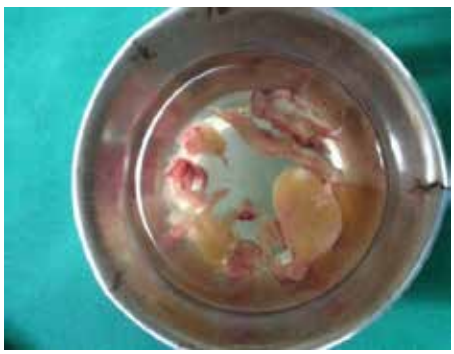

Fig 3 : Specimen

Postoperative recovery uneventful. Histopathology report shown features suggestive of inflammatory polyp without any evidence of malignancy. Debris from the sphenoethmoidal recess, sent for culture revealed aspergillus flavus and we advised , Itraconazole, 200 mg per day for 2 months.

Patient was given regular follow up with endoscopic examination. There was no evidence of recurrence and patient is free of all symptoms.

DISCUSSION: Choanal polyps are solitary, pedunculated herniation of sinus mucosa into the choana and nasopharynx. Sphenochoanal polyps are one of the varieties of choanal polyps. Choanal polyps mostly arise from maxillary sinus less commonly from sphenoid sinus. Very rare from ethmoid sinuses and never reported from frontal sinus. . They have three parts, intrasinusal, osteal and extra sinusal. According to Dada's, antrochoanal polyps account for 4-6% of all nasal polyps. Theories of origin of sphenochoanal polyp are many but none of them are universally accepted. Some authors proposed allergy as aetiology but laboratory test like RAST and skin prick tests came against the proposal. Some suggested to be intramural cyst enlarging and protruding through the osteum into the choana. Thrombosis of lymphatic vessels following an attack of sinusitis may result in the formation of these cysts. Berg aspirated fluid from the choanal polyp and intramural cysts and found similar concentration of proteins. In our case it is fungal sinusitis confined to sphenoidal sinus and few posterior ethmoid sinuses producing edema of sinus mucosa and herniation of this mucosa into the choana and nasopharynx. Fungal elements sent for culture revealed aspergillus. Patient is advised itraconazole, 100 mg, twice daily for 2 months.

We have to differentiate sphenochoanal polyp from common antrochoanal polyp. In diagnostic nasal endoscopy if polyp is originating medial to the middle turbinate leaving the middle meatus free, it is sphenochoanal polyp. If it is lateral to the middle turbinate and pedicle is coming out of the middle meatus it is antrochoanal polyp. Osteum of the concerned sinus will be widened along with an opaque sinus on CT. we are all performing computerized tomography in all cases of nasal polyposis for diagnostic as well as to know the concealed anatomy and abnormalities of nose and paranasal sinuses. If there is opaque sphenoid sinus and choana with free maxillary sinus, most likely it is sphenochoanal polyp.

The best way to manage Sphenochoanal polyp is by using endoscope guided microdebrider. It will allow the surgeon to remove the bulk of the polyp, and to trace the stalk into the sphenoidal sinus with minimal bleeding. The other option being endoscopic sinus surgery using conventional instruments.

Histopathology of choanal polyp reveals a cystic center surrounded by edematous stroma with inflammatory cell infiltrate. Surface is covered by respiratory epithelium. Min and col showed that esinophilic infiltration, number of goblet cells and sub mucosal glands is more in choanal polyp than in simple nasal polyposis.

The most important differential diagnosis is antrochoanal polyp. Others are nasopharyngeal angiofibroma, fungal sinusitis, inverted papilloma and other benign lesions.

Tosun and col reported that most of the sphenochoanal polyps occurred in children or young adults. In these cases more aggressive approaches like external ethmoidectomy approach, caldwells approach are contra indicated as they interfere with facial skeletal maturation. Endoscopic approach is safe procedure.

CONCLUSION: Sphenochoanal polyp is uncommon than antrochoanal polyp. So careful clinical examination, diagnostic endoscopy and radiological study are necessary to diagnose sphenochoanal polyp. Treatment is endoscopic sinus surgery and regular follow up. All anatomical variations and pathological abnormalities should be kept in mind to avoid complications of endoscopic sphenoid surgery. Recurrence is rare.

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