

Bilateral Antrochoanal Polyps: An Analysis from Four Cases

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ABSTRACT

Bilateral antrochoanal polyps (ACPs) are a rare entity. We studied four cases of bilateral ACPs that presented to us. We found a close association of allergy (75%) and chronic rhinosinusitis (CRS) (50%) as etiological factors. The anatomical factors like deviated nasal septum (75%), inferior turbinate hypertrophy (50%), and concha bullosa (25%) are also commonly associated with bilateral ACPs. Endoscopic sinus surgery was performed in all the patients with special emphasis to correct the anatomical factors. Inferior meatal antrostomy was performed in two cases to allow easy access of the angled microdebrider blade for clearing the polyp from the anterolateral and anterosuperior limits of the antrum. After a mean follow-up period of 23 months, no recurrence was found.

Keywords: Bilateral antrochoanal polyp, Endoscopic surgery, Maxillary antrum.

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INTRODUCTION

Antrochoanal polyps (ACPs) usually present unilaterally. Most commonly, they arise from the maxillary antrum, grow into nasal cavity, and posteriorly toward the choana filling the nasopharynx and sometimes even extend into the oropharynx. The probable etiology is unknown. However, chronic infection in the maxillary sinus is one of the pathological factors associated with it.

Antrochoanal polyps account for 6% of the nasal polyps. Majority occur in childhood. However, they have been reported to occur in all age groups. Most common symptom is unilateral nasal obstruction. The

exact incidence of bilateral ACPs is not known. This study highlights the various features that are common to bilateral ACPs along with their management.

CASE REPORT

Patients and Methods

A total of four male patients with bilateral ACPs were referred to our department between 2010 and 2014. Mean age of patients was 26 years with one child who was 7 years old. The major symptom in our patients was nasal obstruction (100%). Snoring was noticed in 3 cases (75%). All the patients were thoroughly evaluated with preoperative endoscopy and computed tomography (CT) of nose and paranasal sinuses. Endoscopic surgery under general anesthesia was performed in all cases. Follow-up was done by routine nasal endoscopies.

RESULTS

All the four patients (100%) had bilateral ACPs. During etiological evaluation, three patients (75%) had allergy and two patients (50%) had symptoms suggestive of chronic rhinosinusitis (CRS) according to rhinosinusitis task force definitions.¹ Thorough radiological evaluation (Figs 1A and B) found deviated nasal septum in three patients (75%), inferior turbinate hypertrophy in two patients (50%), and soft tissue densities involving the anterior ethmoidal cells in two patients (50%). Unilateral concha bullosa was found in one patient (25%). All patients underwent endoscopic surgery. One patient (25%) underwent revision surgery for recurrence of his polyp on the side of the deviated nasal septum. Intraoperatively, the cystic component of the polyp was found inside the maxillary sinus on six (75%) out of eight sides (four patients). The types of surgical procedures are mentioned in Table 1.

Histopathological examination of the specimen showed inflammatory polyps in all four patients (100%). Mean postoperative follow-up was 23 months including the revision case. No recurrence was found in the follow-up period.

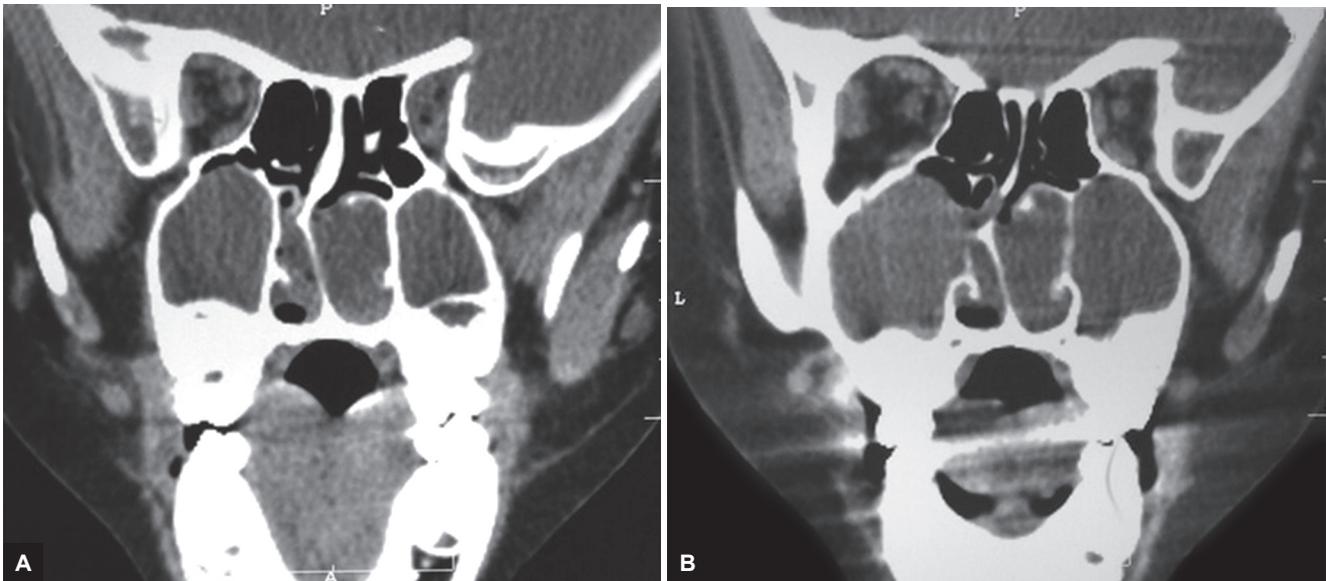
DISCUSSION

In 1906 Killian² first described the ACPs. These polyps account for 4 to 6% of all the nasal polyps.³ Antrochoanal polyps are predominantly unilateral. They arise most

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Figs 1A and B: Coronal images of computerized tomography paranasal sinuses showing bilateral ACPs

Table 1: Surgical procedures performed for the treatment of ACPs

<i>Surgical procedure</i>	<i>No. of patients (%)</i>
Uncinectomy + middle meatal antrostomy	4 (100)
Septoplasty	3 (75)
Inferior meatal antrostomy	2 (50)
Anterior ethmoidectomy	2 (50)
Adenoidectomy	1 (25)

commonly from the maxillary antrum, grow through the enlarged accessory or natural ostia into the nasal cavity, and posteriorly toward the choana. The exact etiopathogenesis of these polyps is not known. Forced prolapse of the maxillary cyst or edematous mucosa which would have developed secondary to chronic infection or inflammation inside the sinus through an already narrowed osteomeatal complex can lead to development of ACPs.⁴

Antrochoanal polyps are common in children; however, they can be seen from 1st decade of life to 7th decade.¹ The mean age in our patients was 26 years. The main presenting complaint was bilateral nasal obstruction. Snoring and mouth breathing was noted in 75% of cases. Al-Mazrou et al⁵ also noted snoring and mouth breathing in patients with ACPs more so in pediatric population. Allergy (75%) and CRS (50%) were found to be etiologies in our study. Frosini et al⁴ found association of CRS in 10% and allergy in 60% of their study population. Ozcan et al⁶ found 21% association with allergy in their study.

In our study, association with deviated nasal septum was found in three (75%) cases, inferior turbinate hypertrophy in two patients (50%), concha bullosa in one patient (25%), and adenoid hypertrophy in one (25%). Similar associated anatomical factors were noted by

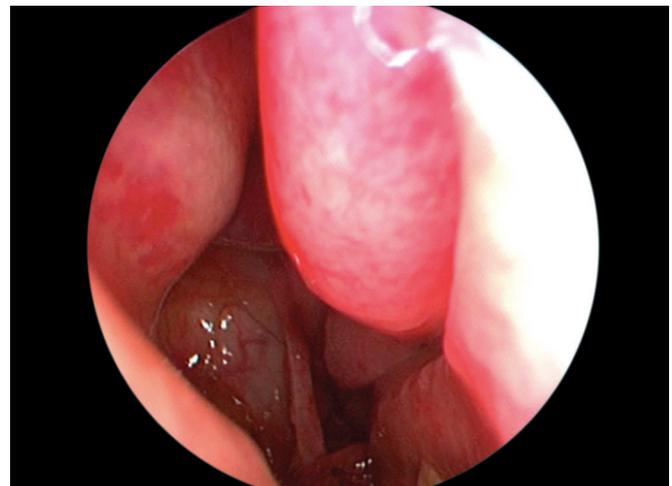


Fig. 2: Postoperative endoscopic picture after 6 months showing widened maxillary ostia

Kurukahvecioğlu et al.⁷ Frosini et al⁴ noted deviated nasal septum in 55%, inferior turbinate hypertrophy in 21%, and concha bullosa in 7% of cases with unilateral ACPs. All the patients underwent uncinectomy with middle meatal antrostomy and complete excision of the polypi on both sides. Meticulous use of angled endoscopes and microdebrider (both straight and angled) helped in complete clearance of polypi. Inferior meatal antrostomy was done in the child and in the revision case for creating better access for the angled microdebrider blade to the anterolateral and anterosuperior walls of the maxillary antrum. The child also underwent adenoidectomy for hypertrophic adenoids. Basu et al⁸ proposed Caldwell Luc procedure and Ozdek et al⁹ proposed transcanine sinusotomy for clearance of antral part. Tahir et al¹⁰ also proposed use of microdebrider in removal of antrochoanal polypi. Septoplasty as an additional procedure

was done in three patients (75%). In their series, Yuca et al¹¹ mentioned only one (5%) septoplasty out of 19 unilateral ACPs. Mean follow-up period in our study was 23 months, including the revision case with no evidence of recurrence (Fig. 2). Kurukahvecioğlu et al⁷ followed up their unilateral ACPs after endoscopic removal for 1.5 years without recurrence. Ozcan et al⁶ found two out of 14 (14%) recurrences in their first 6 months follow-up. Frosini et al⁴ noted 2% recurrences after a follow-up period of 18 months.

CONCLUSION

Bilateral ACPs are very rare. Snoring and mouth breathing along with bilateral nasal obstruction is the most common presentation. Close association with allergy is seen commonly in bilateral ACPs compared to unilateral disease. The associated anatomical factors like deviated nasal septum, inferior turbinate hypertrophy are much more common in bilateral ACPs as compared to unilateral polyps. Thorough preoperative evaluation with meticulous endoscopic clearance using powered instruments along with addressing of the anatomical factors is essential to prevent recurrences.

CONSENT

Written informed consent was obtained from the patient for publication of this case report and any accompanying

images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

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