Acta Scientific Otolaryngology

Volume 2 Issue 1 January 2020

Case Report

Evaluation and Management of Antrochoanal Polyps as a Case Report

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Received: November 20, 2019

Published: January 07, 2020

Abstract

Antrochoanal polyps (ACPs) are benign polypoid lesions arising from the maxillary antrum with extending to the choana. They occur more commonly in children and young adults, and they are mostly unilateral. The etiopathogenesis of ACPs is not clear. Nasal obstruction and nasal drainage are the most common presenting symptoms. The differential diagnosis should include the causes of unilateral nasal obstruction. Nasal endoscopy and computed tomography scans are the main diagnostic techniques, and the treatment of ACPs is always surgical. Functional endoscopic sinus surgery (FESS) and powered instrumentation during FESS for complete removal of ACPs are extremely safe and effective procedures. Physicians should focus on detecting the exact origin and extent of the polyp to prevent recurrence.

Keywords: Antrochoanal Polyp; Diagnosis; Nasal Obstruction; Treatment

Introduction

The antrochoanal polyp is an inflammatory nasal polyp found more frequently in children than adults. It was reported that ACPs constitute approximately 4-6% of all nasal polyps in the general population. It represents up to 42% of all nasal polyps in children and 4-6% in adults [1-3]. Approximately 70% of patients with clinical presentation are between 30 and 70yr old [4]. ACPs are more common in males than females [4-8]. Cook et al.4observed that the incidence of ACPs was 70% in males and 30% in females.

ACPs are almost always unilateral, although bilateral ACPs have been reported in literature [9,10]. Killian first described the polyp as a solitary mass with both cystic and solid components in the maxillary sinus extending into the nasopharynx [3]. The polyp can enlarge enough to be visible in the oropharynx, similar to the patient presented in this case.

In the pediatric population, the most common symptoms of an antrochoanal polyp are nasal obstruction and discharge. However, other routine findings include snoring, headache, mouth breathing, epistaxis, anosmia, halitosis, dyspnea, dysphagia, dysphonia and nasal pruritis, snoring and obstructive sleep apnea [5,11-13].

The true etiology of antrochoanal polyps is unknown but a case series review of 200 antrochoanal polyps found that the only significant risk factor is an anatomic anomaly [2]. The most common abnormalities, as noted by the authors, were nasal septal deviation, inferior turbinate hypertrophy and concha bullosa [2].

Nasal endoscopy and computed tomography (CT) scans are required for making the diagnosis and the treatment planning.

Anterior rhinoscopy usually reveals an intranasal polypoidal mass. A larger polyp may extend into the nasopharynx and the polyp may be seen by posterior rhinoscopy or in the mouth. Nasal endoscopy and CT are the main diagnostic techniques. ACPs typically appear as a smooth, bluish or yellowish mass on nasal endoscopy.

The gold standard for diagnosing an antrochoanal polyp is a CT scan showing a hypodense mass arising from an enlarged, opacified maxillary sinus [3]. The polyps do not cause bony destruction [6]. However, when large, they can expand and enlarge the ostium. The location of the polyp and its soft consistency, cause its characteristic dumbbell shape.

The only definitive treatment is surgery. In performing the surgery, it is important to remove the whole mass, as opposed to a simple polypectomy, because of the high rate of recurrence. Historically, the Caldwell-Luc procedure was performed to remove the antral portion of the polyp. However, this procedure has fallen from favor due to potential complications, such as facial paresthesia, injury of the infraorbital nerve and risk of damaging the maxillary growth centers in children [14]. Currently, the treatment of choice is functional endoscopic sinus surgery (FESS). This procedure involves removal of both the solid nasal and cystic antral portions of the polyp. This technique minimizes the risk of complications and recurrence, with some studies showing complete resolution [14]. In general, the rate of recurrence can reach up to 15%, depending on the surgical approach and technique [15].

In our case, the patient was taken to surgery and underwent FESS with a right maxillary antrostomy and polyp exterbation with curetting of mucosa in the maxillary sinus. He has received follow-

up care from ENT specialists who have noted no evidence of recurrence of the antrochoanal polyp. In general, follow up care should be continued for at least 2 years after surgery in order to detect 95% of recurrence. Our patient will continue to receive routine follow-up care over this span, and his prognosis is excellent.

Case Report

A 9-year-boy presented to the ENT office for the first time in July 2018. with nasal opstruction lasting for a month. The patient had no prior ENT history except one acute otitis media few years ago. He had a history of a lower respiratory tract infectios and the acute mononucleosis syndrome. His local findings were: slightly retracted TM on the left side, livid lower nasal conchas and hypertrophic palatine tonsiles with some asymmetry. He was prescribed for a nasal corticosterodi spray and suggested to perform an allergy testing.

On the first check up after a month he was felling better. In local findings there were hypertrophy and lividity of lower nasal concha on the right and lividity of the lower concha on the left side, with the same otoscopy findings. He was continued with tha nasal corticosteroid (mometazon) for the next three months.

On the next check up after a three months he was not complaing of the nasal congestion anymore. Local findings were hypertrophy and lividity of the right lower concha, postnasal viscous drip with normal otoscopy and oropharyngeal findings. He was advised to continue with a local corticosteroids in a cycles depending on the nasal opstruction.

In the May 2019. he was compalining of sore throat without febricity, nor any truble with breathning nor nasal congestion. Local findins were livid and hypertrofic lower nasal conchas, aphtous ulcer of the uvula, hiperemic pharyngeal anterior arches, prominent polipoid mass from epipharynx. Lab. exams were normal, CT scan showed soft tissu mass in the right maxillar sinus with propagation throughout widend sinus ostium to posterior nasal cavity and nasopharynx. Medial wall of right maxillar sinus was thined without signs of destruction.

Figure 1

The FESS was performed and pathological mass was extracted and sent to pathology confirming atrochoanal polypus.

Figure 2

On the follow up after month, three months and six months there were no signs of relaps.

Differential diagnosis

The differential diagnosis of ACPs should include juvenile angiofibroma, nasal glioma, meningoencephalocele, inverted papilloma, mucocele, mucus retention cyst, Tornwalt's cyst, grossly enlarged adenoids, lymphoma and nasopharyngeal malignancies.

Conclusion

The antrochoanal polyp is a rare, benign, nasal polyp found primarily in children. The risk factors leading to its etiology are unclear. Comprising nasal mucosa, it originates in the maxillary sinus and can cause symptoms of nasal obstruction. The polyp can be definitively diagnosed on CT. Treatment involves surgery and recurrence is rare if the entire polyp is removed.

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