Case Report

Antrochoanal polyp: A Case Report

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ABSTRACT

Background: Antrochoanal polyp is a rare benign, non-ectopic polypoid lesion that arises from the maxillary antrum. The commonly affected age group ranges from ten to 15 years. It typically results in a unilateral lesion. However, it is rare to see this tumor in children less than 15 years of age.

Methods: Case report: this report presented a case of an 8-year-old Saudi male patient who presented with a complaint of dysphagia, snoring, nasal discharge, and mouth breathing for several months.

Results: Computed tomography showed complete opacification of the right maxillary sinus with extension to the right nasal fossa and nasopharynx through a widened maxillary infundibulum, which is suggestive of an antrochoanal polyp.

Conclusion: Even though antrochonal polyps are frequently seen in children between the ages of ten and 15, it is important to remember that they can develop younger.

Keyword: Antrochoanal polyp (ACP), benign lesion, Functional endoscopic sinus surgery (FESS), Computed tomography (CT).

Introduction

Antrochoanal polyp (ACP) is a tumor that arises from the maxillary antrum and passes ostia through the nose to the choana [1]. Fortunately, it was considered a benign polypoid lesion [1]. Some cases developed as a consequence of an allergic condition, although this lesion is non-ectopic. One study showed that an aspirin-sensitive triad is found in 24% of patients with ACP [2].

It seemed that teenagers aged 15 are more vulnerable to this lesion than other age groups [3].Generally, it is a unilateral lesion. However, this was rarely seen in children who are less than 15 years old [3]. This scientific paper discussed a rare case of a young child with a huge ACP.

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Case History:

An eight-year-old Saudi male patient from Alahsa, a known case of obstructive sleep apnea, presented through the outpatient clinic. He was in his usual state of health until he started to develop snoring, nasal discharge, and mouth breathing for several months. On examination by an endoscope, there was a bilateral nasal polyp that extended to the nasopharynx and oropharynx. Nasal steroids were given to the patient, and a computed tomography (CT) was ordered. On CT, complete opacification of the right maxillary sinus with extension to the right nasal fossa and nasopharynx through a widened maxillary infundibulum was found, suggesting an ACP for clinical correlation. (Figures 1, 2, 3) show axial, coronal, and sagittal views of ACP, respectively. The nasal septum has shifted to the left. The cribriform plate of the ethmoid is symmetrical. Normal CT features of both orbits and para-nasopharyngeal soft tissue planes. The image portion of the brain appears normal. Functional endoscopic sinus surgery (FESS) was done with complete excision of the polyp (Figures 4, 5), which show intra-operative nasal endoscopy of the right and left, respectively, (Figure 6) shows the right nasal cavity post-op. It was sent for histopathological workup as shown in (Figure 7), which demonstrates:

1-Gross-Description: The polyp consists of two pieces of grayish myxoid soft tissue: the first one is 3 x 2 x 1 cm, and the second one is 0.5 x 0.5 x 0.2 cm.

2-Microscopical Description: The section shows a polypoid lesion covered by a respiratory epithelium, with areas showing squamous metaplasia. Stroma shows an edematous myxoid appearance with a mild to moderate mixed inflammatory cell infiltrate: lymphocytes, plasma cells, neutrophils, and eosinophils. Some inflammatory cells infiltrate within the surface epithelium, causing some erosion and hemorrhage. Few mucous glands are seen within the stroma; some show squamous metaplasia. Some dilated, congested vessels are seen.

Two weeks postoperatively, the patient's symptoms improved.

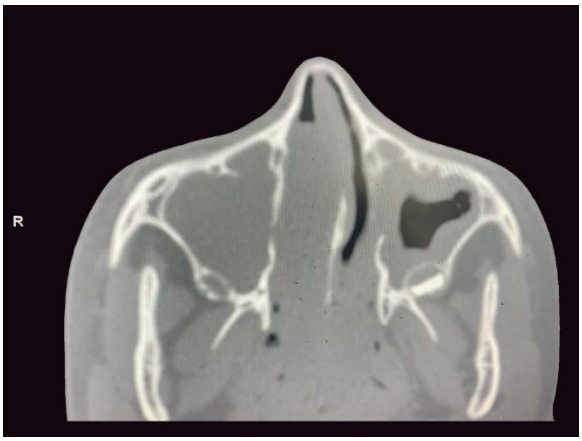

Figure 1: Axial CT sections showing ACP (P) filling the right maxillary sinus (S) and growing through the ostium into the middle meatus and the posterior choana.

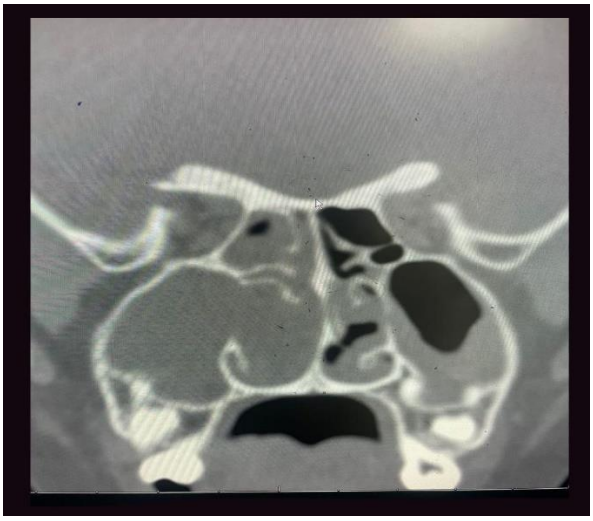

Figure 2: Coronal CT section showing opacification of the right maxillary sinus, with extension to the right nasal fossa and deviated nasal septum to the left.

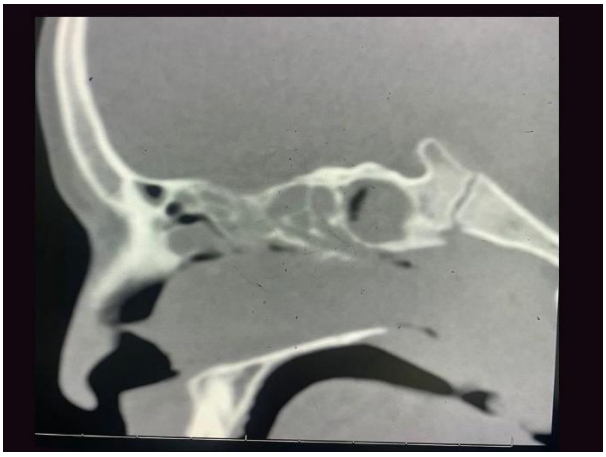

Figure 3: Sagittal CT section of the ACP with extension to the nasopharynx.

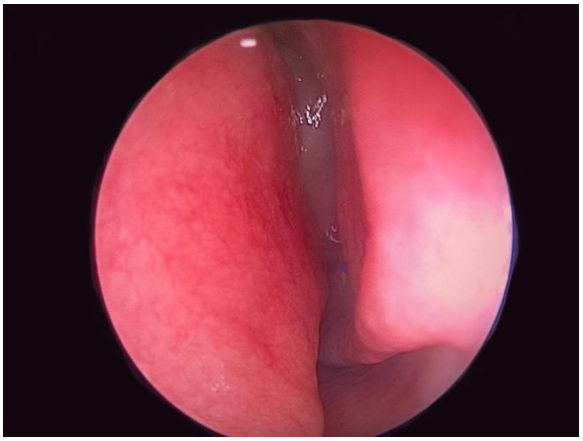

Figure 4: Intra-operative nasal endoscopy view of the right nasal cavity showing the ACP appeared as a bright, white mass in the middle meatus. The stalk of ACP rising from the right maxillary sinus.

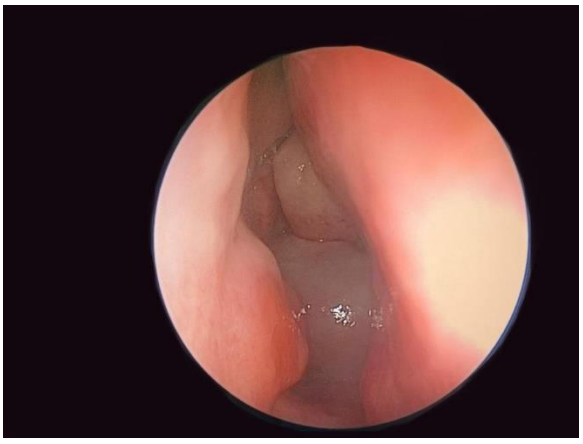

Figure 5: Intra-operative nasal endoscopy view of the left nasal cavity showing the extension of ACP to the left side.

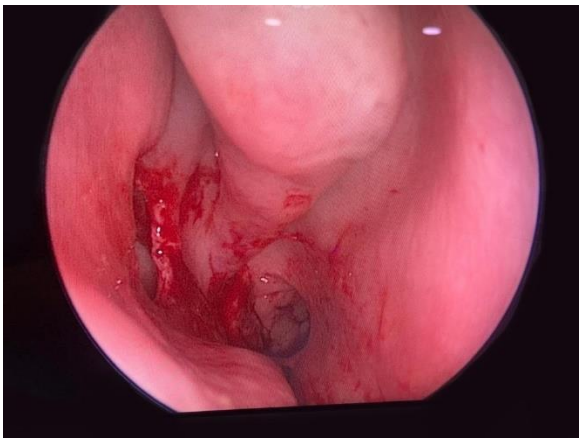

Figure 6: Post complete right ACP excision.

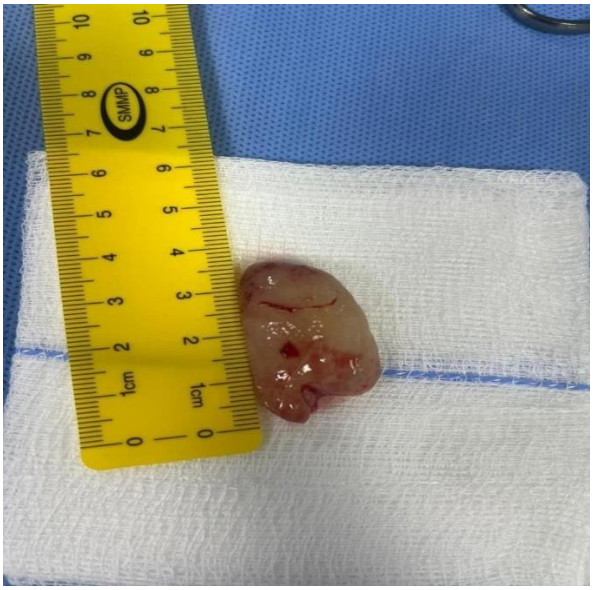

Figure 7: The remaining part of the ACP (as the shaver removed the anterior nasal part of the ACP).

Discussion

ACP is an infrequent benign unilateral mass that accounts for 4–6% of all nasal polyps [4]. The etiopathogenesis is still not well understood. However, allergies, chronic rhinosinusitis, viral infections, and bacterial infections are linked to an increased prevalence of ACP [5]. In addition, anatomical variants that increase pressure inside the maxillary sinus are considered a possible cause of their formation [5]. Most cases of ACP are presented with unilateral nasal obstruction, rarely bilateral, mouth breathing, rhinorrhea, nasal speech, snoring, and obstructive sleep apnea syndrome. [1] Yet, in selective cases, patients might present with epistaxis, hyposmia, and headaches. [1] Histological aspects are the gold standard diagnostic tool. [1] Although the combination of endoscopy and computed tomography (CT) of sinonasal cavities can guide diagnostic reasoning. [1] A CT scan classifies ACP into three stages depending on the degree of extension to the nasopharynx and visibility of the accessory ostium: [1] stage one, the polyp extends to the nose but not to the nasopharynx. In stage two, the polyp extends to the nasopharynx, and the maxillary ostium is completely occluded by the polyp neck, stage three, the maxillary ostium is partially occluded by the polyp neck. Lee et al. reported that stages two and three of ACP were more common than stage one in children compared with adults [6]. This presenting case is staged as two. The main management of ACP is complete excision by endoscopic approach through FESS. FESS is associated with fewer complications but a high recurrence rate among children, so it is mandatory to

fully remove the antral portion of ACP [2]. According to Shayasate et al., who claimed that the recurrence rate is higher in children and that follow-up for two years allows for the diagnosis of 95% of recurrences [7]. Bilateral ACP can be confused with other differential diagnoses, and that will lead to late diagnosis and management [1]. A biopsy is an essential tool to differentiate, diagnose, and treat the case correctly [4].

Conclusion

In spite of the fact that antrochonal polyps are common in the age group of ten-15, take into account that they can happen earlier. This surgery has a less invasive method, a faster recovery period, and no visible scar. However, it can cause permanent numbness in the upper teeth, palate, or face.

Conflict of Interest

None

Funding

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