ISSN 2689-8268 | Volume 7

American Journal of Surgery and Clinical Case Reports

Case Report Open Access

Angiomatous Antrochoanal Polyp: A Rare Entity

Singh M, Singh G*, Rao N and Bansal G

Department of Otorhinolaryngology, Maharishi Markendeshwar Institute of Medical Science and Research (Deemed to be university), Mullana, India

***Corresponding author:**

Gurchand Singh,
Department of Otorhinolaryngology, Maharishi Markendeshwar Institute of Medical Science and Research (Deemed to be university), Mullana, India

Received: 26 Feb 2024
Accepted: 06 Apr 2024
Published: 12 Apr 2024
J Short Name: AJSCCR

Citation:

Singh M. Angiomatous Antrochoanal Polyp: A Rare Entity. Ame J Surg Clin Case Rep. 2024; 7(14): 1-5

Keywords:

Angiomatous; Antrochoanal polyp

1. Abstract

Angiomatous polyp is a benign, non-neoplastic variant of antrochoanal polyp. And its incidence is 4-5% of all nasal polyps. The diagnosis and management requires more detailed evaluation in respect to classical antrochoanal polyps. Clinical picture of angiofibroma, simple antrochoanal polyp and inverted papilloma may resemble with each other. As the polyps invade surrounding bone, these should be distinguished from a malignant mass. We present a rare case of angiomatous antrochonal polyp. Detailed history was taken, general and local examination was done, followed by diagnostic nasal endoscopic examination. Later on, computed tomography of para nasal sinus done to plan for further management. Histopathological examination confirmed our diagnosis.

2. Introduction

Antrochoanal polyps are the most common type of sinonasal polyp which develops in the paranasal sinuses and reaches the nasopharynx through the choana. They most commonly present with complaints of unilateral nasal obstruction. These sinonasal polyps grows from the mucosa of maxillary sinus, reaches the nasal cavity via maxillary ostium and then spread into the choana. [1,2] One of the rare varieties of antrochoanal polyp is angiomatous antrochoanal polyp which constitutes only 4-5% of all sinonasal polyps. [3] It is a benign and non-neoplastic lesion. It usually presents with nasal obstruction and rarely epistaxis. It is also known as an "angiectatic polyp" and is distinguished by significant vascular proliferation, angiectasis and with regions which are vulnerable to vascular insufficiency leading to infraction, thrombosis and venous stasis [7]. Their diagnosis and management require more detailed evaluation in respect to classical antrochoanal polyp. As these lesions have high risk of being mistaken for neoplastic pathologies like juvenile angiofibroma, hemangioma, inverted papilloma and even malignant sinonasal tumor due to their clinical and radiological characteristics, the identification of its distinctive physical characteristics will aid in avoiding the incorrect diagnosis of a vascular tumor and the need for unnecessary surgery [7].

3. Case Report

A 10 years old girl child reported to outdoor patient department of ENT, with chief complaints of Nasal obstruction, headache, change in voice, difficulty and choking during swallowing and breathing difficulty since 6 months which was associated with mouth breathing, snoring, foreign body sensation and loss of sense of smell. She had few episodes of bleeding from nose with on/off headache. There was history of previous surgery for antrochoanal polyp 3 years back, but no documents were retrieved from the patient. On examination, patient was vitally stable and had a nasal twang. On anterior rhinoscopy, mild discharge was present in bilateral nasal cavity with grade I left sided deviated nasal septum and right sided compensatory inferior turbinate hypertrophy. Cold spatula test was done which couldn't be interpreted well due to the mass blocking the entire nasopharynx and there was no improvement with cottles manoeuvre. A bulge was seen in soft palate with centrally placed uvula and bilateral tonsillar fossa were clear. A well circumscribed, pinkish polypoidal mass was seen in the oropharynx, hanging from the nasopharynx with smooth surface. (marked as) (Figure 1). On 70-degree endoscopy was done which showed the mass was seen just touching the epiglottis and rest of the structures were within normal limits. Diagnostic nasal endoscopy was done with 0-degree endoscope which showed right inferior turbinate hypertrophy, the right antrum could be seen wide open, a pink fleshy stalk could be appreciated coming out from maxillary sinus and going towards the choana (Figure 2,3). Vessels could be seen over the stalk. On left side grade I deviated nasal septum present, with secretions

present in nasopharynx. On probing the stalk of the mass, it was insensitive to pain and probe could not be passed all around the mass as it is hanging in the oropharynx.

A soft tissue attenuation polyp could be seen arising from the anterior wall of maxilla. Medially, it was extended into the posterior nasal cavity via accessory ostium with large polypoidal soft tissue mass bulging into the nasopharynx and oropharynx causing marked airway narrowing in the region. The pharyngeal soft tissue component measured approximately 5.8cm x 2.4cm and was abutting the uvula and posterior pharyngeal wall. In post contrast images, minimal enhancement was seen within the lesion. Prominent vascular channel was seen traversing the lesion in its entire length with superolateral extension towards the anterior wall of right maxillary sinus which showed mild irregularity and periosteal thickening, suggestive of angiomatous antrochoanal polyp (Figure 4a, b). Patient was planned for excision of mass via functional endoscopic sinus surgery under GA. Intra operatively, on palpation of the mass through oral cavity, it was firm to touch, non-tender and did not bleed on touch and was free from all the surfaces. On endoscopy, A pinkish fleshy stalk of polyp could be seen arising from the anterior wall of right maxillary sinus which was separated and cut using cautery and the mass was removed through the oral cavity. The base of polyp, which was present in the anterior wall of right maxillary sinus was cauterised using monopolar cautery (Figure 5a, b). Grossly, the size of the specimen was 5.5cm x 4cm x 2.6cm approximately (Figure 6). On histopathological examination (Figure 7a & b) cut sections showed yellowish brown areas. It was lined by respiratory epithelium exhibiting focal ulceration and squamous metaplasia. The underlying stroma was edematous with myxoid change and shows moderate lymphoplasmacytic infiltrate admixed with eosinophils. The stroma also showed proliferating thick and thin-walled blood vessels, few of which showed evidence of thrombosis which confirmed the diagnosis of angiomatous antrochoanal polyp. Post operative period was uneventful and patient was symptomatically better and had improvement in voice quality and was adequately relieved from nasal obstruction. No signs of recurrence after 6 months postoperative follow up.

Figure 1: On examination of oral cavity (U- uvula, TD- Tongue depressor)

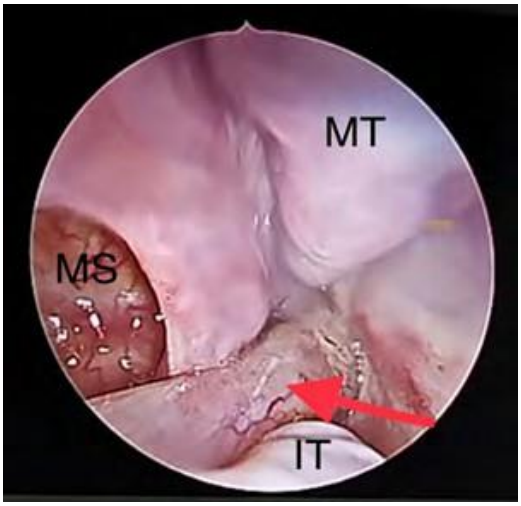

Figure 2: Stalk of Antrochonal Polyp Can Be Seen Coming Out of Right Maxillary Antrum
(Ms- Maxillary Sinus, Mt- Middle Turbinate, It- Inferior Turbinate, Red Arrow- Prominent Vessel Running Over the Stalk)

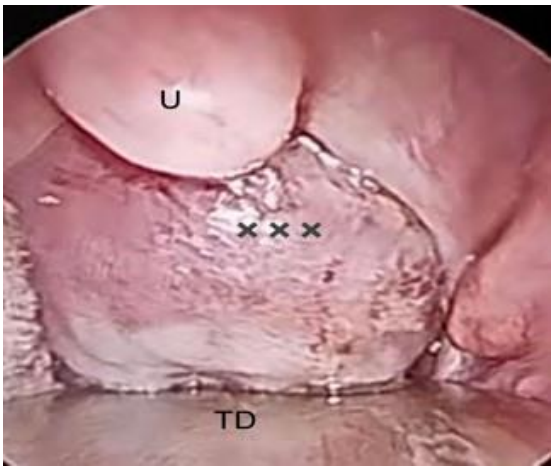

Figure 3: Polyp Can Be Seen Hanging In The Oropharynx (U- Uvula, Td- Tongue Depressor, Xxx - Mass Seen In The Oropharynx) On Cect Pns-

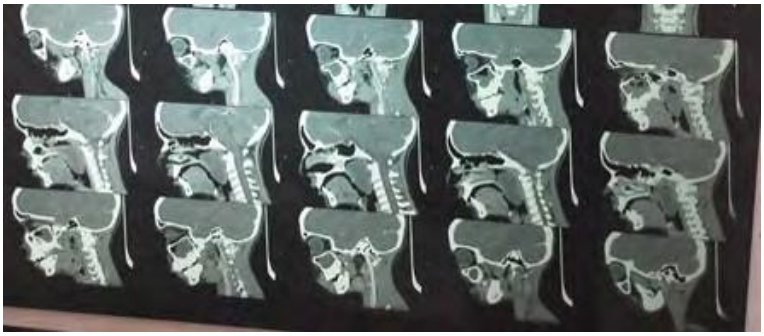

Figure 4a: CECT PNS (Axial Section)

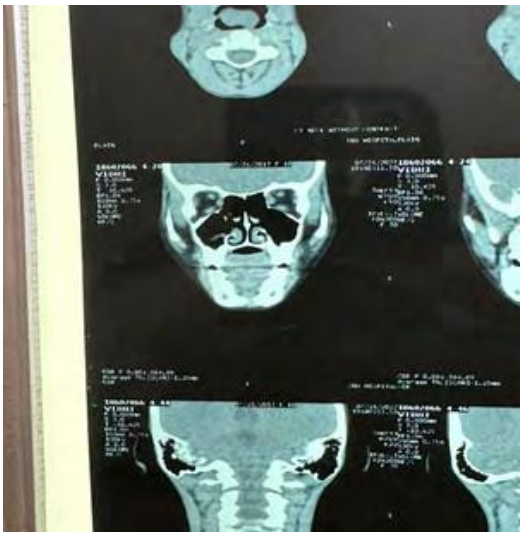

Figure 4b: CECT PNS (Coronal Sections)

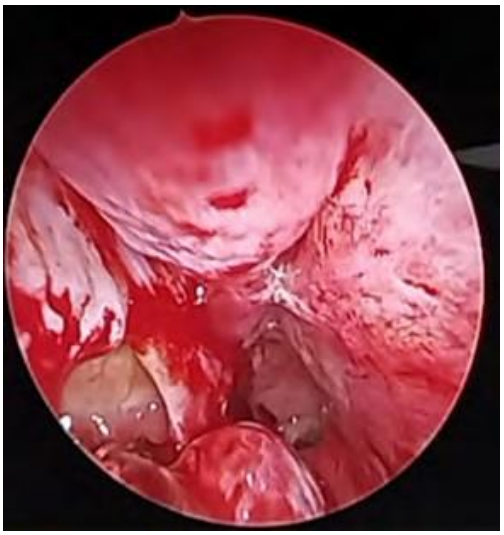

Figure 5a: Nasal Cavity Can Be Seen Cleared Of Polyp

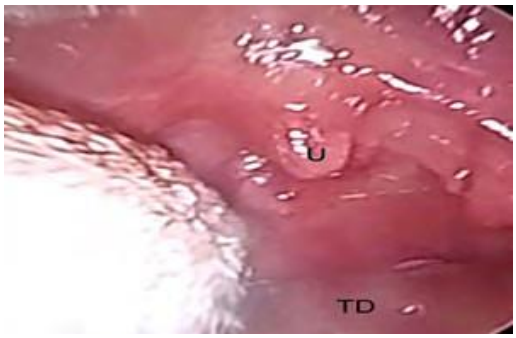

Figure 5b: Post operative image showing clear oropharynx (U- Uvula, TD- Tongue depressor)

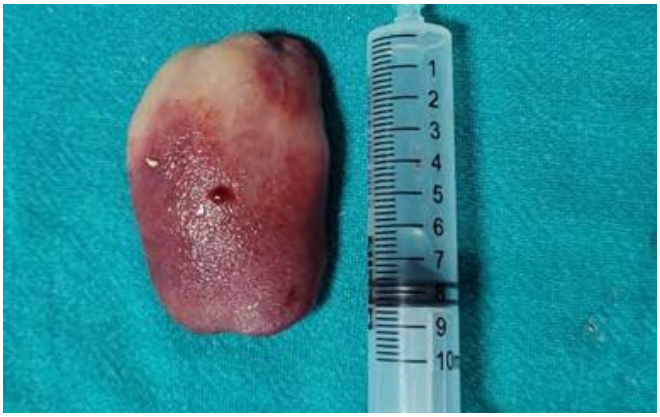

Figure 6: Specimen of Angiomatous Antrochoanal Polyp

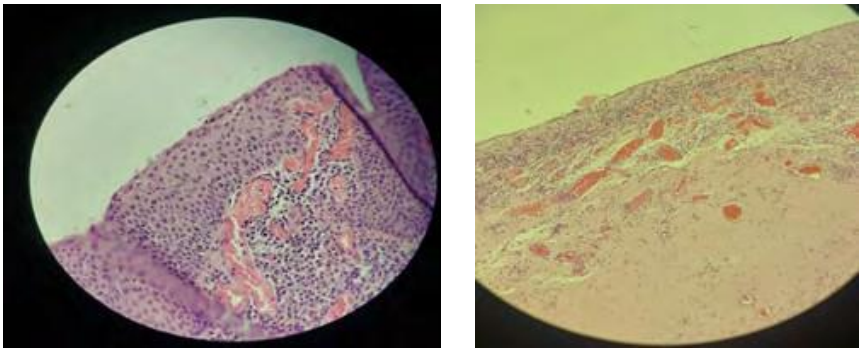

Figure 7a and b: Histological sections from the specimen

4. Discussion

Inflammatory sinonasal polyps (SNPs) have been classified into five types according to their histological examination (on the basis of predominant stromal element): glandular, edematous, fibrous, cystic and angiectatic/angiomatous polyp [4]. Only 4–5% of all SNPs are angiomatous nasal polyps (ANPs), which is rare [3, 4, 7] They usually presents with unilateral nasal obstruction [3, 5] and rarely epistaxis. The nomenclature of SAPs is not consistent in the literature and includes granuloma telangiectaticum, vascular granuloma, organizing hematoma, cavernous hemangioma, hematoma-like mass of the antrum, pseudotumor, hemorrhagic necrotic polyp, and angioectatic or angiomatous polyp. However, the clinical, radiological, and pathological findings of the above-mentioned entities are nearabout all the same. [4] Several hypotheses have been documented in literature for the pathogenesis of SAPs. One is that SAP is derivative of an antrochoanal polyp. [4] An antrochoanal polyp originates from the maxillary sinus and protrudes via the sinus ostium into the nasal cavity, which may extend posteriorly to the posterior choana and even the nasopharynx. Owing to the anatomical structure, a sinonasal polyp is more vulnerable to vascular compromise or strangulation at several sensitive regions, such as at the polyp pedicle, the sinus ostium, the posterior end of the inferior turbinate, the posterior choana, or the nasopharynx. [4] The fragility of the AACP is due to infarction and so sometimes it is difficult to remove them end block.

Vascular dilatation, stasis, edema and ischemia of the polyp occur as a result of the vessels being compressed. Additionally, this may result in thrombosis, venous infarction and subsequent neovascularization and fibrosis of the polyp, for which the term “angiomatous” was proposed. [4] The progressive expansion and localized

bony destruction associated with SAP are also explained by this process. Mostly, they present as soft, gelatinous translucent polypoidal, painless mass with nasal discharge causing obstruction of the nasal cavity. Other presenting clinical symptoms are loss of smell sensation, epistaxis, exophthalmoses, proptosis and visual disturbances. [3] These polyps can grow very fast and thus result in bone erosion that could mimic malignancy clinically and thus result in diagnostic dilemma. [7] Hence, the diagnosis of angiomatous antrochoanal polyp is done with the help of the gross diagnostic criteria, detected on endoscopic examination and aided by CT scanning. Contrast enhanced CT scans may show angiomatous polyps as non-enhancing or minimally enhancing nasal vault masses without pterygopalatine fossa involvement.[3] Conventional magnetic resonance imaging (MRI)is a better modality for preoperative diagnosis of the angiomatous nasal polyp, and showed characteristic hypo intensity on T1 weighted images and internal heterogeneous hyperintensity with a peripheral hypointense rim on T2 weighted images, as well as and strong nodular and patchy enhancement on postcontrast MRIs [3].

Histopathological examination of angiomatous antrochoanal polyps (AACPs) showed a highly vascular stroma with multiple dilated blood vessels, separated by loose fibro-connective stroma that exhibited rich inflammatory cellular infiltration (mostly plasma cells) with thrombi at different stages of development; this contrasted with the oedematous core and sparse cellular infiltration seen in ordinary antrochoanal polyps [3-6]. The clinical and imaging characteristics of AACPs might mimic neoplastic lesions such as malignant sinonasal tumors, inverted papillomas, juvenile angiofibromas and hemangiomas [7]. This should trigger an additional histological and radiological investigation and allow for appropriate diagnosis. There are no clear guidelines for management; however, the transnasal endoscopic surgical excision of AACPS with the restoration of sinus drainage continues to be the treatment of choice [4,5]. It is proved to be more feasible and effective with short recovery time. Regular post-operative follow-up was recommended to diagnose a possible recurrence.

5. Conclusion

Angiomatous Antro choanal polyps are rare variants which needs special attention, at the time of diagnosis and as well as during surgery. Features like epistaxis and bone destruction is suggestive of angiomatous polyps, as well as sinonasal neoplastic pathologies. Clinical, radiological and pathological data are needed to provide a definite diagnosis. Detailed surgical planning, including preventive measures, is important to control intense perioperative bleeding. Surgical strategy must be directed for total excision and the control of bleeding and recurrence.

6. Conflict of Interest

There was no conflict of interest.

References

1. Aydin O, Keskin G, Ustundag E, Iseri M, Ozkarakas H. Choanal polyps: an evaluation of 53 cases. Am J Rhinol. 2007; 21(2): 164–8.
2. Choudhury N, Hariri A, Saleh H, Sandison A. Diagnostic challenges of antrochoanal polyps: a review of sixty-one cases. Clin Otolaryngol. 2018; 43(2): 670–4.
3. Goyal S, Jayvardhan G, Goyal S, Saini I. Angiomatous nasal polyp: clinical diagnostic dilemma. Int J Cancer Ther Oncol. 2015; 3(1): 03018.
4. Tam YY, Wu CC, Lee TJ, Lin YY, Chen TD, Huang CC, et al. The clinicopathological features of sinonasal angiomatous polyps. Int J Gen Med. 2016; 207-12.
5. Sayed RH, Abu-Dief EE. Does antrochoanal polyp present with epistaxis?. J Laryngol Otol. 2010; 124(5): 505-9.
6. Akpınar ME, Onder NS, Altundag A, Yigit O. An Angiomatous Antrochoanal Polyp with Epistaxis and Bony Destruction. Turkish Archives Otolaryngol. 2013; 51(3).
7. Ali AA, Sayed RH, Dahy KG. Angiomatous antrochoanal polyp: a rare entity of choanal polyps. Egyptian J Otolaryngol. 2023; 39(1): 1-5.