Indian Journal of Otolaryngology and Head & Neck Surgery (2024) 76:2003–2007
https://doi.org/10.1007/s12070-023-04358-0

CLINICAL REPORT

Sinonasal Angiomatous Polyp: A Case Report

Priya Kanagamuthu[1] · **Adithya Vasudevan**[1]

Received: 31 October 2023 / Accepted: 13 November 2023 / Published online: 9 December 2023

Abstract
The sinonasal angiomatous polyp is an uncommon kind of sinonasal polyp that presents as solitary painless growth with aggressive bone erosion, and bleeding similar to cancerous lesions. Computed tomography scanning and magnetic resonance imaging are valuable for its evaluation. Management involves endoscopic surgical excision with sinus drainage restoration. Histopathologically, large dilated blood vessels resembling capillaries can be found.

Keywords Angiomatous polyp · Sinonasal polyp · Computed tomography · Functional endoscopic sinus surgery

Introduction

Sinonasal angiomatous polyp (SAP), classified as a variant of sinonasal polyps, represents an infrequent benign pathological entity. The condition, known as angiectatic polyp, is distinguished by a notable increase in vascular proliferation and angiectasis. Additionally, there is the accumulation of pseudoamyloid and the presence of atypical stromal cells [1]. They exhibit a propensity for rapid and aggressive growth, leading to consequential bone erosion and the manifestation of severe bleeding akin to that observed in malignant lesions. This similarity in presentation poses a challenge in distinguishing between the two entities. Henceforth, it is of utmost importance to establish an accurate preoperative clinical and radiological diagnosis in order to prevent unwarranted and extensive surgical interventions in these individuals. A limited number of sinonasal angiomatous polyps cases have been documented in the existing medical literature up until the present time.

✉ Priya Kanagamuthu
catchpriya.29@gmail.com

[1] Department of ENT, Chettinad Hospital and Research Institute, Chettinad Academy of Research and Education, Chettinad Health City, Kelambakkam, Tamil Nadu 603103, India

Case Report

A 35-year-old known diabetic male presented with complaints of gradually progressive bilateral nasal block (right > left) for the past 5 months. The patient had no other comorbidities.

Examination revealed decreased fogging and vibration on the right side on cold spatula and cotton wool vibration test. Diagnostic nasal endoscopy revealed a firm mass occupying the entire right middle meatus which did not bleed on touch, left middle meatus and left part of the nasopharynx was free. CT PNS revealed near complete soft tissue opacification with bony remodeling of the right maxillary and anterior wall of the pterygomaxillary canal with complete resorption of the right middle turbinate and projection of soft tissue from right maxillary sinus into right nasal cavity causing bowing with mild resorption of nasal septum, the mass was seen extending posteriorly reaching upto right posterior choanae and superiorly reaching upto right cribiform plaste with rarefaction changes and associated mucosal thickening of right frontal, bilateral ethmoidal, maxillary and sphenoid sinuses (Figs. 1, 2). All these features were likely suggestive of right antrochoanal polyp. There was also 'S' Shaped nasal septum.

The patient was subjected to standard blood investigations which were normal. Functional Endoscopic Sinus Surgery with septoplasty was carried out under general anesthesia. Under strict aseptic precautions and under general anesthesia, the patient was placed in supine position. A reddish mass was seen originating from right maxillary sinus occupying the entire right middle meatus extending posteriorly and

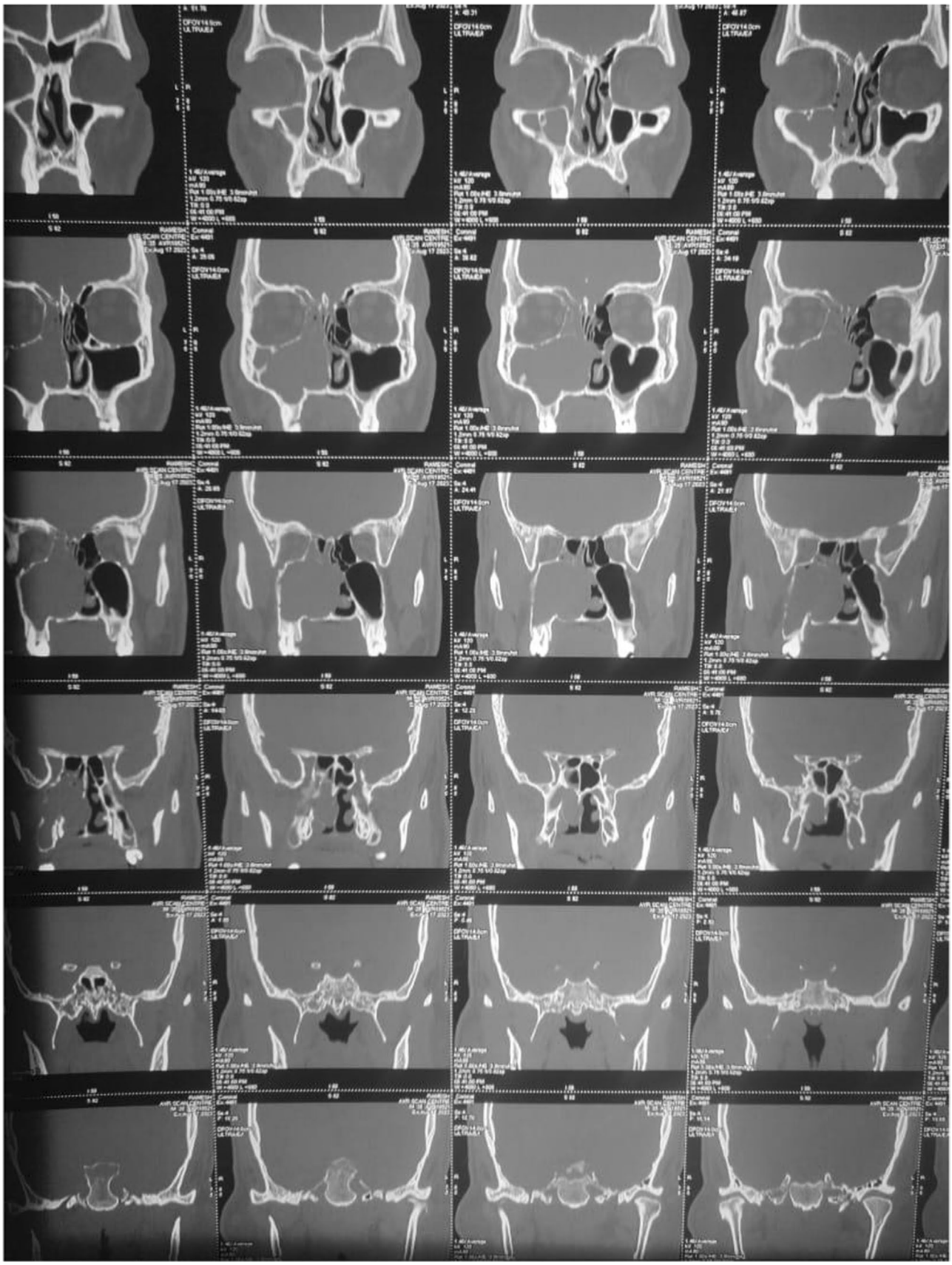

Fig. 1 Coronal view of CT PNS showing mass in right maxillary sinus with bony remodelling changes

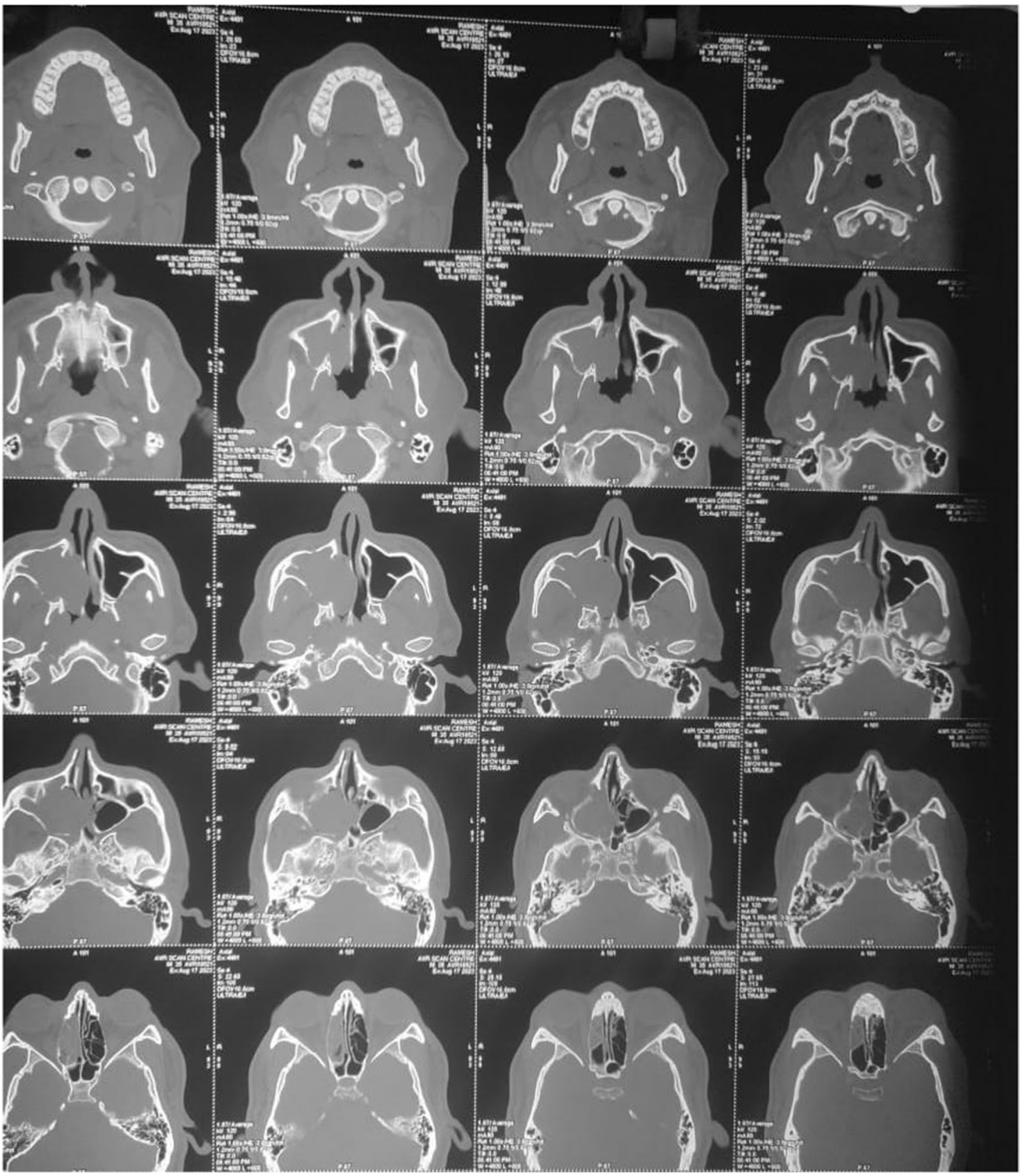

Fig. 2 Axial view of CT PNS showing mass from right maxillary sinus extending upto posterior choanae

superiorly. The polyp was removed (Fig. 3) and the specimen was sent for histopathological examination. Uncinectomy was done and ostiums were widened. The deviated part of nasal septum was removed. Complete hemostasis was achieved. Ivalon pack was kept and nasal dressing was applied. Extubation was done and the patient was transferred to the postoperative unit. Biopsy results revealed polypoidal tissue lined by pseudostratified columnar ciliated epithelium

Fig. 3 Picture of the specimen removed following FESS

with edema of subepithelium and chronic inflammatory infiltrate predominantly composed of lymphocytes, plasma cells with hemosiderin-laden macrophages with extensive areas of hemorrhage, fibrosis, hyalinization, congested blood vessels and few thin-walled blood vessels along with a small foci showing seromucinous glands admixed with inflammatory changes. All these features were thus suggestive of a diagnosis of sinonasal angiomatous polyp. The patient was treated with antibiotics, steroids, insulin, and other supportive medications. The Ivalon pack was removed on postoperative day 1. The patient was discharged and found to be doing well on review.

Discussion

Angiomatous nasal polyp is also referred to as by other names such as angiectatic polyp, cavernous haemangioma, pseudotumor, inflammatory granuloma telangiectaticum, pseudoangioma, organised or organising hematoma, vascular granuloma, and haemorrhage necrotic polyp in medical literature. It is a type of sinonasal inflammatory polyps which is an infrequent benign lesion that constitutes merely 4–5% of the total sino-nasal polyps (SNP) [2]. Its clinical manifestations encompass epistaxis, nasal discharge, nasal obstruction, a notable decrease in olfactory perception, proptosis, snoring, headaches, facial edema, exophthalmos, and visual impairments. The typical manifestation of this condition is characterized by the presence of solitary, painless, pliable, gelatinous, translucent, and polypoid growth within the nasal cavity. The differential diagnosis of sinonasal inverted papilloma (SAP) encompasses various conditions, including but not limited to inflammatory polyp, haemangioma, mucocele, fungus ball, juvenile nasopharyngeal angiofibroma, squamous cell carcinoma, adenoid cystic carcinoma, and melanoma [3, 4].

Malignancy should be considered as a differential diagnosis as the observed lesions exhibit characteristics reminiscent of malignancy, as evidenced by their marked aggressiveness and the presence of bone erosion. Features of malignant lesions include indefinite edges, absent fat planes, and immense bony destruction which enhances heterogeneously on post-contrast imaging on computed tomography (CT) scan whereas angiomatous polyps are typically seen as either non-enhancing or minimally enhancing on contrast-enhanced computed tomography (CT) scans.

The vast majority of angiomatous sinonasal polyps originate within the maxillary sinus, from where they extend across the choana and into the nasopharynx [5, 6]. The gradual enlargement can result in erosion and disturbance of the adjacent osseous structures, accompanied by facial swelling and proptosis [7]. It is histologically characterized by widespread vascular proliferation, hemorrhage, and infarction. The preferred therapeutic approach for the management of this condition is the endoscopic surgical excision, which aims to restore proper sinus drainage.

Conclusion

Sinonasal angiomatous nasal polyps represent a subset of nasal polyps characterized by their rapid growth and aggressive expansion. A comprehensive evaluation of clinical manifestations followed by radiographic evaluation is necessary. Ultimately the diagnosis can be confirmed through the help of histopathological examination after surgical removal. The preferred therapeutic intervention entails the utilization of endoscopic surgical techniques to excise the mass. Provided that complete excision is achieved, the prognosis for the patient is usually favorable, with an exceptionally low likelihood of recurrence.

Funding Nil.

Declarations

Conflict of interest Nil.

Research Involving Human Participants and/or Animals Yes, involves Human participant.

Informed Consent Obtained.

References

1. Peric A, Jovanovski A, Vukomanovic B (2017) Giant angiomatous choanal polyp originating from the middle turbinate: a case report. ENT Updates 7(1):53–56
2. Assiri KS, Al-Ahmari MS, Alshahrani MS (2020) Clinical and pathological features of angiomatous nasal polyps: a report of four cases and review of literature. Cureus 12(4):e7642
3. Idris AI, Ramli RR, Sachlin IS (2017) Angiomatous antrochoanal polyps: Challenge in diagnosis. Egypt J Ear Nose Throat Allied Sci 18(2):137–139
4. Changwei D, Wang Q, Guo Q, Wang Z, Lu X, Zhang J (2015) Sinonasal Angiomatous Polyp. Medicine 94(29):e1196
5. Sheahan P, Crotty PL, Hamilton S, Colreavy M, McShane D (2005) Infarcted angiomatous nasal polyps. Arch Otorhinolaryngol 262:225–230
6. Wang YZ, Yang BT, Wang ZC et al. (2012) MR evaluation of sinonasal angiomatous polyp. AJNR Am J Neuroradiol 33:767–772
7. Kim EY, Kim HJ, Chung SK, et al. (2008) Sinonasal organized hematoma: CT and MR imaging findings. AJNR Am J Neuroradiol. 29:1204–1208. http://www.ajnr.org/content/29/6/1204