Angiomatous nasal polyp in a 24-year-old female with nasal bleed: A rare case

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Abstract

Background: Nasal polyp is a non-cancerous, benign condition. Out of all inflammatory nasal polyps its prevalence is only 4-5%. It is not very commonly reported in literature. It can lead to clinical misdiagnosis of malignant sino-nasal tumour because of its rapidly growing nature. It also exhibits aggressive clinical behaviour at times. As on radiology it is very difficult to pick up this lesion, so histopathology becomes very important for asserting this diagnosis.

Objective: To present and discuss the case of a Angiomatous polyp presented with nasal bleeding.

Case Report: A 24-year-old female, came with complaint of right nasal bleeding/blockage since last five months. Her nasal endoscopy was suggestive of right-nostril polypoidal-mass. On CECT-PNS, well-defined lesion depicted significant enhancement of vascular polyp with possible differentials of angiomatous nasal-polyp and nasopharyngeal angiofibroma. Histopathology report on excised nasal-lesion was of benign vascular lesion, favouring angiomatous nasal polyp. Differential diagnosis for this was cavernous haemangioma. Patient was advised IHC and final diagnosis was of angiomatous nasal polyp.

Conclusion: Histopathology is must to diagnose the lesion as Angiomatous nasal polyp.

Key words: Angiomatous polyp, cavernous haemangioma, Vascular lesion.

Introduction

Sino-nasal polyps are of five types based on its histology, they are 1) Oedematous, 2) fibrous, 3) Glandular, 4) Cystic, and 5) Angiectatic[1]. Angiectatic polyps are also known as angiomatous polyps. They are rare constituting approximately 5% of total inflammatory or allergic polyps which grow rapidly exhibiting an aggressive clinical behaviour simulating malignancy[2]. Hence, an accurate preoperative diagnosis is essential for planning a simplified surgical resection, avoiding extensive surgical approaches.

Case report

Twenty-four year old female, a house wife, belonging to lower socio-economic class, presented with complain of right sided on & off nasal bleeding since last 5 month and on & off nasal blockage since childhood. She underwent two nasal procedures in her childhood. There was no significant history of hypertension, diabetes. On further evaluation, nasal endoscopy was suggestive of polypoidal mass in right sided nasal cavity. CECT PNS was suggestive of a vascular lesion, with the possible differentials of- 1) Angiomatous polyp, 2) Nasal angiofibroma. Blood investigations were within normal limit. Intra-operative findings were of gross DNS (Deviated Nasal Septum) to left with polypoidal mass in right nasal cavity. The polypoidal mass was removed & sent for histopathological examination.

On gross examination, the polypoidal mass measured 3.5x3.0x0.8 cm in size, grey-white in color. External surface is encapsulated, shiny and tense. Histopathology report on excised nasal lesion was of benign vascular lesion, favoring angiomatous nasal polyp. Differential diagnosis for this was cavernous hemangioma. Patient was offered final diagnosis of angiomatous nasal polyp.

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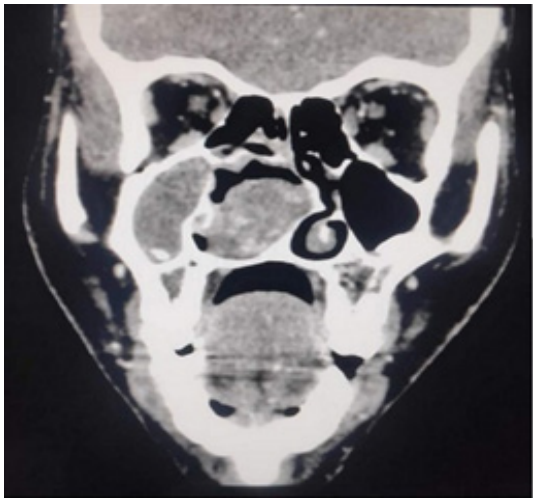

Figure 1 (coronal section: CECT PNS).

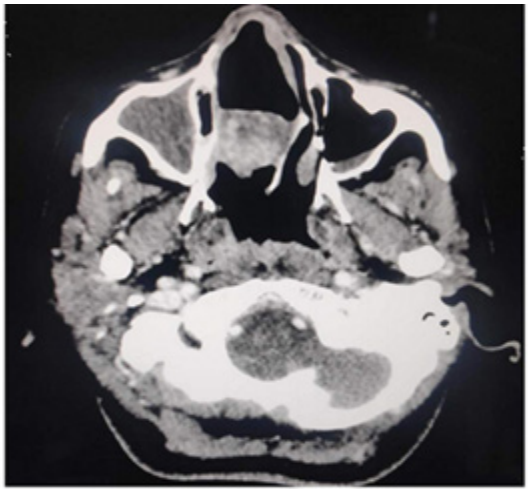

Figure 2 (axial section: CECT PNS)

Figure 1 (coronal) and **Figure 2** (axial) images of contrast enhanced PNS show heterogeneously enhancing, lobulated, soft tissue density lesion in right side of nasal cavity causing scalloping of right middle and inferior turbinate and extending up to maxillary sinus ostium with secondary complete right maxillary sinus opacification

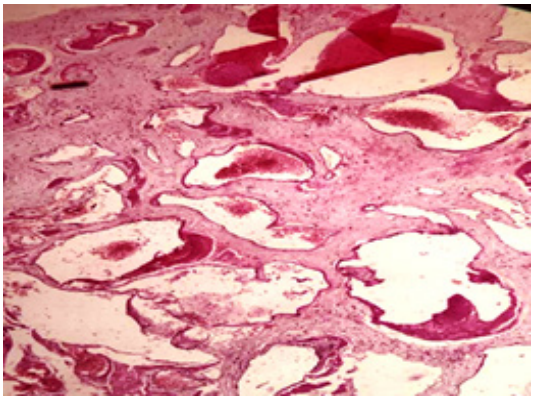

Figure 3 (H&E, X400)

Figure 3: HPE image shows edematous fibro-collagenous stroma separating variably sized medium and small sized thin-walled congested, ectatic blood vessels. Features are suggestive of benign vascular lesion of Angiomatous nasal polyp (H&E, X400).

Discussion

Angiomatous nasal polyp (ANP) is a subtype of Sino-nasal polyp. It is a benign, non-neoplastic condition rarely reported in literature[1-4]. There are many descriptions of ANP in English literature, names include cavernous angioma, pseudotumor, inflammatory granuloma, telengiectaticum, pseudo-angioma, vascular granuloma[5].

Common symptoms of nasal polyp is nasal obstruction but patient may also be present with complain of epistaxis, exophthalmos, proptosis & visual disturbances[6]. In our case patient had complain of nasal blockage & nasal bleeding.

Diagnosis is based on clinical history, physical examination, investigations which include anterior rhinoscopy, nasal endoscopy, CT scan, MRI, Histopathology and IHC. CT-PNS is helpful not only in diagnosis but also in selecting suitable surgical approach. This is because CE-CT PNS offers valuable information about the boundaries of each polyp[7]. As radiology is very challenging to pick up this lesion at times, histopathology becomes paramount for asserting this diagnosis.

Furthermore, inflammatory nasal polyps could be misdiagnosed histologically with other tumors including papilloma, squamous cell carcinoma, nasal lymphoma, and other soft tissue neoplasms in the nasopharynx. Few reports have concluded that sinonasal polyps with profuse vascularity are easily confused with multiple vascular tumors such as nasopharyngeal angiofibromas. However, the microscopic features for ANPs have not been addressed well enough in several studies. The features of ANP under light microscopy are as follows: (i) racemose aggregates of irregularly shaped blood vessels resembling dilated capillaries and no elastic or muscular layers (ii) acute and chronic inflammation common, hemosiderinladen macrophages (iii) heterogeneity from field to field and patchy areas with features of typical inflammatory polyps; (iv) paucicellular stroma with scattered fibroblasts and myofibroblasts, marked nuclear enlargement, large nucleoli, no mitoses.[4-7]

Treatment is surgery based and preferred method is intranasal endoscopic polypectomy. Excision of ACP stalk is a key point to reduce the recurrence rate[8]. Surgically, endoscopic excision is preferred instead

of other extensive approaches. Excision is associated with minimal bleeding both intraoperatively and in postoperative period[6]. In our case, the patient was completely relieved of nasal obstruction.

Cavernous hemangiomas present as port wine nevi. Recurrence is uncommon and only exceptional examples show malignant transformation. Most are superficial, commonly in head and neck region. Deep visceral location like liver or skeletal location is rare but well documented for cavernous hemangioma. Markedly dilated dermal vessels may elevate overlying epidermis, which may be atrophic showing predominantly ectatic, dilated large vascular channels. Cavernous hemangioma is rarely seen in the bony nasal septum or lateral nasal wall. Thrombus within these vascular spaces can occasionally calcify and be identified at CT as phleboliths.This benign tumor is seldom associated with Maffucci syndrome, blue rubber bleb nevus syndrome and Kasabach-Merritt syndrome[8-9].

Nasopharygeal angiofibroma affects adolescent or young male patients. Histologically uniform spindle cells, myxoid / collagenous stroma, network of thin walled, branching blood vessels are seen in this condition[10].

Conclusion

Angiomatous nasal polyp is a benign, non-malignant condition. It can simulate malignant sino-nasal tumor as it can grow rapidly exhibiting aggressive clinical behavior. As radiology is very challenging to pick up this lesion, histopathology becomes paramount for asserting this diagnosis. It is characterized by edematous fibro-collagenous stroma separating variably sized medium and small sized thin-walled congested, ectatic blood vessels.

References

1. *Iemura-Kashiwagi M, Kikuchi M, Koyasu S, Kitada Y, Sugimoto A, Haga H, et al. Angiomatous Nasal Polyp Diagnosed by Preoperative Imaging and Successfully Resected by Endonasal Endoscopic Surgery: A Case Report. Cureus. 2021;13(10):e18786.*
2. *Nimbkar SA, Sane SY. Histology and histochemistry of nasal polyps. J Postgrad Med. 1978;24:231-4.*
3. *Yfantis HG, Drachenberg CB, Gray W, Papadimitriou JC. Angiectatic Nasal Polyps That Clinically Simulate a Malignant Process. Archives of Pathology & Laboratory Medicine. 2000;124(3):406-10.*
4. *Kashyap SK, I Dixit, M Tausif, S Chaudhary. Sino-nasal angiomatous polyp-rare occurrence: A case report. JMSCR 2019;7(5):149-52.*
5. *Y Bao, J Bian, C Cheng, H Han, L Shen, et al. Clinical and pathological features in angiomatous nasal polyp. Int J clin Exp Med 2016;9(11):22901-6.*
6. *Guntur S, Shenoy VS, Kshithi K, Domah HA, Chaithra GV. Rare case of an angiectatic sinonasal polyp feigning malignancy. Journal of Cancer Research and Therapeutics. 2019;15(3):733-6.*
7. *Hekmatnia A, Shirvani F, Mahmoodi F, Hashemi M. Association of anatomic variations with antrochoanal polyps in paranasal sinus computed tomography scan. J Res Med Sci. 2017;22:3.*
8. *Franche GL, Granzotto EH, de Borba AT, Hermes F, Saleh Cde S, de Souza PA. Endoscopic polipectomy with middle meatal antrostomy for antrochoanal polyp treatment. Braz J Otorhinolaryngol. 2007;73(5):689-92.*
9. *Archontaki M, Stamou AK, Hajiioannou JK, Kalomenopoulou M, Korkolis DP, Kyrmizakis DE. Cavernous haemangioma of the left nasal cavity. Acta Otorhinolaryngol Ital. 2008;28(6):309-11.*
10. *Abdelwahab M, Overdevest JB, Elmokadem A, El-Sisi H, El-Kholy NA, Zaki H, et al. Nasopharyngeal Angiofibroma Staging with a Novel Nominal Basis: An 18-Year Study in a Tertiary Center. Otolaryngol Head Neck Surg. 2019;161(2):352-361.*

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