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Nasal Angiofibroma With Cystic Degeneration – A Rare Case Report

KEYWORDS: Angiofibroma, middle turbinate, intracranial cavity, benign tumor, nasopharynx

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ABSTRACT *Nasal angiofibroma is a rare case in ENT and its complication like cystic degeneration is also very uncommon. A 60 year old female patient came to ENT out patient department with complaints of nasal obstruction since 3 days, nasal discharge since 3 days and pain in the nose since 3 days. There was history of intermittent nasal obstruction since 5 months. On examination a big firm smooth mass was visible in the right nasal cavity with mucopurulent secretions. When we tried to clean the secretion with suction a gauss of fluid came out from the mass. Then nasal obstruction was partially relieved. We did CT scan to identify the root of the origin.*

We excised the tumor and sent for histopathological study. Intra operatively mass was originating from the middle turbinate. The H.P report came as angiofibroma.

We are reporting this case for its rare occurrence.

Introduction

Nasopharyngeal angiofibromas are rare invasive fibrovascular tumors and mainly seen in adolescent boys (1). It accounts for 0.5% of all head and neck tumors (2). Origin of the tumor is from the postero-lateral wall of the nasal cavity near the superior margin of the sphenopalatine foramen (3). Because of the close proximity to the nasopharynx, they invade this site and called nasopharyngeal angiofibroma.

Angiofibroma, not related to the nasopharynx is called extra nasopharyngeal angiofibroma. In 1980, De Vincentiis and Pinelli reviewed a series of 704 cases of angiofibromas and found that 13 cases manifested outside the nasopharynx, thus suggesting that extra nasopharyngeal localization of this tumor is a possible, although rare occurrence (4).

Complication like cystic degeneration in extranasopharyngeal angiofibroma is very rare and not been reported in any literature.

Case Report

A 60 year old female patient came to ENT out patient department with complaints of right nasal obstruction since three days, nasal discharge since three days and pain in the nose since three days. There was history of intermittent nasal obstruction since 5 months for which she has not taken any treatment. She was non hypertensive and non diabetic.

On general examination patient was having average body built. All the vital parameters were within normal limit. On local examination the right side of the external nose was swollen (Figure-1). On anterior rhinoscopy a reddish, smooth mass was filling the right nasal cavity with mucopurulent secretions. On probing the mass it was firm in consistency and did not bleed.

We have planned for diagnostic nasal endoscopy. On nasal endoscopy there was a big smooth mass filling the right nasal cavity. During the suction cleaning of the secretions, a gauss of fluid came out from the mass and the size was reduced. The mass was found to be extending superiorly. We did some investigations to find out the origin and the extension of the tumor. Computed tomography picture showed, the mass originating from the middle turbinate and extending to right frontal sinus. There was a big cavity inside the mass with thin wall. Inferiorly irregular solid mass was visible (Figure-2 and 3). It was not extending to intracranial cavity or to the orbit.

After all the preoperative investigations the mass was excised under general anesthesia endoscopically and sent for histopathological study. Intra operatively the mass was found to be attached to the middle turbinate anteriorly. Inferiorly the mass was solid and irregular and superiorly it was thin like cyst wall with a big hollow space inside it (Figure-4). It was seems to be a giant concha bullosa extending to the right frontal sinus. The right frontal sinus was wide and dilated out flow tract. The mass and the anterior part of the middle turbinate were excised endoscopically. Frontal sinus opening was further widened anteriorly to prevent stagnation of secretions, by using drill. There was moderate bleeding during the procedure which was controlled by diathermy cautery and nasal pack.

Histopathological study shows outer speudostratified ciliated columnar epithelium and subepithelial fibrocollagenous stroma with mucous secretory glands, many proliferating blood vessels and inflammatory infiltrates. There was no evidence of tuberculosis and malignancy. This feature was suggestive of angiofibroma.

Post operatively nasal pack was removed on next day and patient was discharged after 24 hours of observation. Patient became asymptomatic immediately after removal of pack. Nasal obstruction and discharge subsided immediately and pain decreased within few days. As the tumor was filled with mucoid discharged which came out during suction cleaning, it was diagnosed to be the cystic degeneration of the tumor, which is a rare complication of angiofibroma.

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Patient is under regular followed up. There is no evidence of recurrence.

Discussion

Angiofibroma is a benign tumor common in nasopharynx. It is called juvenile nasopharyngeal angiofibroma, as because it is common in young age group. It is typically found in male. There are so many theories regarding the origin of nasopharyngeal angiofibroma. Accepted origin of the above tumor is near the sphenopalatine foramen. After its origin it comes to occupy the nasopharynx. Some book opines that the tumor virtually always arises from the nasopharynx and only later may extend into the nasal cavity (5). The vascular, fibrous nodules occurring outside the nasopharynx are now a days called as extra nasopharyngeal angiofibroma.

However these extra nasopharyngeal angiofibroma are no way related to the nasopharyngeal angiofibroma as because of their different biological history and clinical features with respect to nasopharyngeal tumors and, for these reasons, they should be regarded as a separate clinical entity (6).

Though the extra nasopharyngeal angiofibroma is a benign tumor, but compared to nasopharyngeal angiofibromas, patients affected are older, females can also be involved, symptoms develop more quickly, and hypervascularity is less common (7).

In our case, we are having female patient with older age group and no history of epistaxis. Patient was having immediate onset of three days duration. Her main complaint was unilateral nasal obstruction, nasal discharge and pain in the nose. This sudden onset may be because of cystic degeneration inside the tumor.

We did CT scan to find out the size and the extension of the tumor. Mainly we were concerned about the skull base and intra orbital extension. As because there was no extension to the intra cranial cavity or to the orbit we have not done MRI scan. However as far as concerns instrumental diagnosis, CT scan and magnetic resonance imaging (MRI) are used to determine the tumor site and its extension, with special attention being focused on skull base involvement, intracranial spread and relationship to important vascular and neurologic structures (8). While bone erosion can be more easily revealed by CT scan, MRI is adequate in demonstrating cortical erosion and cancellous replacement by tumor. The administration of a contrast agent in nasopharyngeal angiofibroma leads to a strong and usually homogeneous enhancement on CT and MRI T1 sequences (9).

Enlargement of the sphenopalatine foramen with erosion of the pterygoid plates are regarded as pathognomic radiological features of nasopharyngeal angiofibroma and are best seen on CT. T1-weighted MRI will show a typical ''salt and pepper'' appearance caused by the increased vascularity of the tumor. These we could not found in our case.

On the other hand, extranasopharyngeal angiofibroma usually enhances contrast medium or even nothing, due to the frequent poor vascularity of the tumor (5). But Alvi et al consider CT scan to be sufficient for the diagnosis of extranasopharyngeal angiofibroma, as it clearly delineates and identifies the tumour (10).

There are various approaches for nasopharyngeal angiofibroma like trans palatal approach, lateral rhinotomy approach, sublabial approach and endoscopic approach. Hazarika et al have described the use of laser and endoscope for the same (11). Advances in endoscopic Sino nasal surgery and the ability to embolize these tumors preoperatively have made many of the resections amenable to endoscopic technique.

The morbidity of external approaches must be compared to the morbidity of incomplete tumor resection by endoscopic endonasal approach (12). Therefore, it has been suggested that the tumors involving the ethmoid, maxillary, sphenoid sinus, sphenopalatine foramen, nasopharynx, pterygomaxillary fossa and having limited extension into the infratemporal fossa are amenable to endoscopic resection[12]. So what ever may be the approach, complete excision is usually the rule.

But the extranasopharyngeal angiofibroma, as it is less vascular endoscopic approach is the best approach. Same thing we did in our case. We excised the tumor completely by endoscopic approach and the tissues were sent for histopathological study.

We are reporting this case for its rare occurrence.

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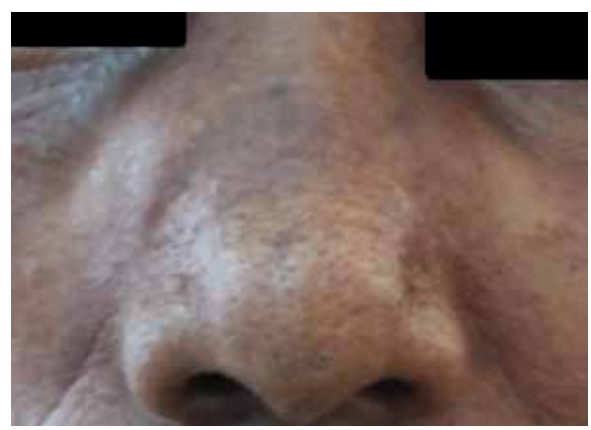
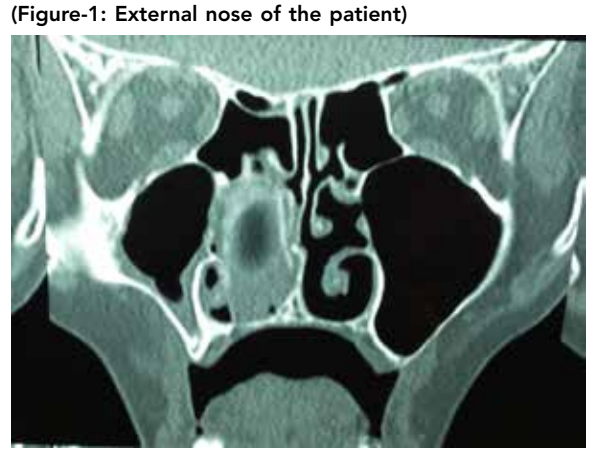


(Figure-1: External nose of the patient)



(Figure- 2: CT scan shows mass in right nasal cavity)

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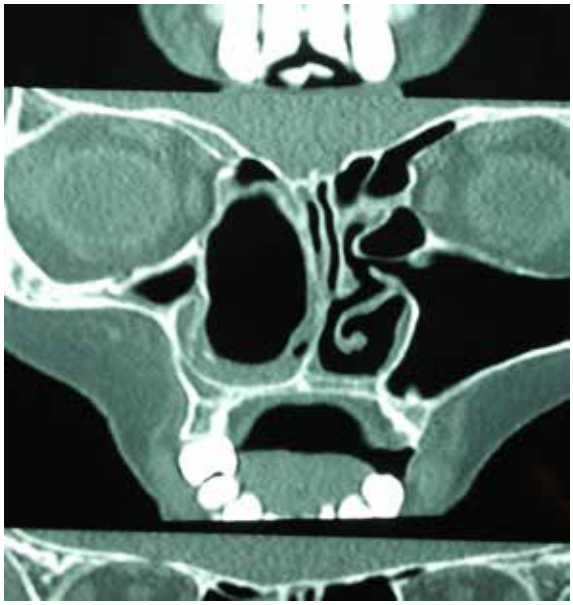
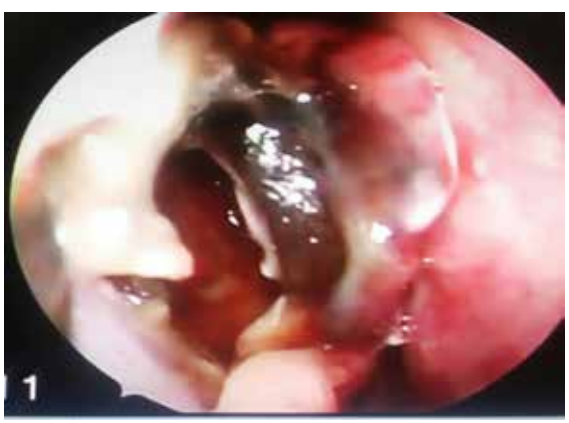


(Figure- 3: CT scan shows hollow mass in right nasal cavity)



(Figure -4: Endoscopic picture showing nasal mass)

References

1. Mistry R.C, Qureshi S.S et al, Juvenile nasopharyngeal Angiofibroma: a single institution study, Ind J Cancer; 2005, Vol 42; Issue 1; P 35-39.
2. Chandler JR, Goulding R et al; Nasopharyngeal Angiofibroma: staging and management. Ann Otol Rhinol Laryngol 1984; 93; 322-9
3. Zito J, Fitzpatrick P, Amedee R. Juvenile nasopharyngeal Angiofibroma. La State Med Soc 2001; 153: 395-8.
4. DeVincentiis G, Pinelli V. Rhinopharyngeal angiofibroma in the pediatric age group. Clinical-statistical contribution. Int J Pediatr Otorhinolaryngol. 1980;2:99–122.
5. Harrison DF. The natural history, pathogenesis, and treatment of juvenile angiofibroma. Personal experience with 44 patients. Arch Otolaryngol Head Neck Surg 1987;113:936-42
6. Tasca I and Ceroni Compadretti G, Extranasopharyngeal angiofibroma of nasal septum. A controversial entity; Acta Otorhinolaryngol Ital. 2008 Dec; 28(6): 312–314
7. Akbas Y, Anadolu Y. Extranasopharyngeal angiofibroma of the head and neck in women. Am J Otolaryngol 2003;24:413-6.
8. Schick B, Kahle G. Radiological findings in angiofibroma. Acta Radiol 2000;41:585-93
9. Maroldi R, Berlucchi M, Farina D, Tomenzoli D, Borghesi A, Pianta L. Benign neoplasm and tumor-like lesions. In: Maroldi R, Nicolai P, editors. Imaging in treatment planning for sinonasal diseases. Berlin, Heidelberg, New York: Springer Verlag 2005. p. 107-58
10. Alvi A, Myssiorek D, Fucks A. Extranasopharyngeal angiofibroma. J Otolaryngol 1996;25:346
11. Hazarika P, Nayak DR, Balakrishnan R, Raj G. Endoscopic and KTP laser-assisted surgery for juvenile nasopharyngeal angiofibromas.Am J Otology. 2002;23:282–286.
12. Surinder K. Singhal, Nitin Gupta et al, Extranasopharyngeal angiofibroma: Report of two cases; Egyptian Journal of Ear, Nose, Throat and Allied Sciences (2014) 15, 73–76