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Case Series

Case series of benign nasal masses with epistaxis

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ABSTRACT

Presenting a case series on the benign nasal masses with epistaxis and their mode of management of cases during the year 2016-2019. The patients coming to OPD with complaints of nasal mass with nasal bleeding were included in this series. Complete blood count, s. electrolytes, renal function tests, liver function tests, chest X-ray, ECG, CECT neck +thorax and biopsy was done. Excision biopsy was done and specimen sent for HPE. This series showed benign nasal mass of which hemangioma was the most common lesion causing epistaxis managed with complete excision of the tumor with less recurrence rate. Epistaxis is a common symptom and recurrent nasal bleeding requires precise clarification of the cause and exclusion diagnostics prior to therapy planning. It is important here to distinguish between locally induced bland epistaxis and symptomatic epistaxis of benign lesions of nose.

Keywords: Epistaxis, JNA, Bleeding nasal polyposis, Hemangiomas

INTRODUCTION

Nasal masses are the more common cause of nasal bleeding in a malignant lesion of nose and paranasal sinuses but epistaxis in benign nasal masses are rare. Causes of nasal bleeding with nasal masses are inflammatory and infectious processes: pyogenic granuloma, benign neoplasms such and juvenile nasopharyngeal angiofibroma, hemangioma etc.[1] Diagnosis with imaging and histopathological examination has a key role in the treatment of the affected individual.[2] However, imaging is important for better defining the total extent of the lesion and guiding the clinician in determining whether medical and/or surgical intervention is required. In this case series, compiling the benign nasal masses presenting with epistaxis during the last 3 years and their varied presentations and mode of management.

CASE SERIES

Representing one case from each diagnosis.

Case 1

A 70 year old female came to ENT OPD with case of right nasal mass with nasal obstruction with nasal bleeding since 6 months, no history of trauma, no history of anosmia, no history of fever\ cold\ cough, no history of comorbidities. On local examination: nose: a pale mass occupying the right nasal cavity seen in the anterior nares with extension to the right cheek. Diffuse swelling of right cheek was seen. No e\o tenderness, minimal nasal discharge+, moderate DNS to left +, patient was worked up for nasal biopsy and it turned out to be angiomatous polyp. CECT PNS: Ill-defined enhancing soft tissue lesion seen involving right maxillary and ethmoidal sinus

with extension into bilateral nasal cavity with complete obliteration. The lesion causes destruction of medial wall of maxillary and ethmoidal sinus. Erosion of nasal septum. Narrowing of nasopharynx is seen. F/s/o = neoplastic etiology (Figure 1). Patient was worked up for excision biopsy under GA with right lateral rhinotomy incision and specimen removed into was diagnosed with HPR as hemangioma and patient is on regular follow-up.

Table 1: Comparing my case series with similar study.

Clinico-pathological profile of sinonasal masses: of my study (2016-2019)		Clinico-pathological profile of sinonasal masses: a study from a tertiary care hospital of India	
Benign neoplastic mass		Benign neoplastic mass	
Haemangioma	06 (60.0)	Haemangioma	9 (90.0)
Hemangiopericytoma	01 (10.0)	Hemangiopericytoma	0 (0)
Angiofibroma	03 (30.0)	Angiofibroma	1 (10.0)
Total	10 (100)	Total	10 (100)

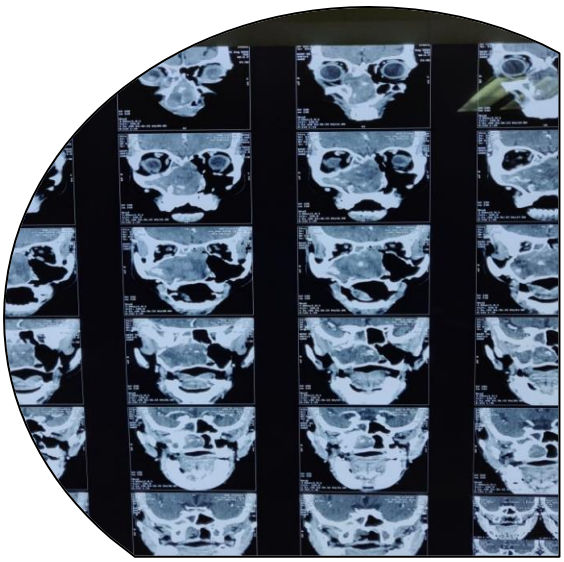

Figure 1: CECT Film showing Contrast enhancing mass occupying the right nasal cavity more probably a neoplastic lesion ? Hemangioma.

Case 2

A 64 year old female came to ENT OPD with c\o right nasal mass with nasal obstruction with nasal bleeding since 10 months, no h\o trauma, no h\o anosmia, no h\o fever\ cold\ cough, no h\o comorbidities. On Local Examination: nose: a reddish mass occupying the right nasal cavity seen in the anterior nares with extension to the right maxillary area, frontal area and right orbit, no e\o tenderness, minimal nasal discharge+, moderate DNS to left +, patient was worked up for nasal biopsy and it turned out to be hemangioma. CECT PNS Ill defined enhancing soft tissue lesion seen involving the right maxillary sinus and extending into the right nasal cavity, choana. Mass extending into the dorsum of nose destroying the septum. F\s\o neoplastic etiology. Patient was worked up for excision biopsy under GA with right lateral rhinotomy incision and specimen removed into was diagnosed with HPR as hemangiopericytoma and patient is on regular follow-up.

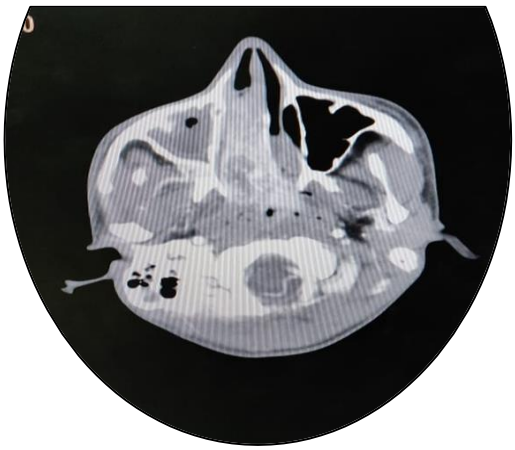

Figure 2: CECT Film showing Contrast enhancing mass occupying the right nasal cavity extending into sphenopalatine foramen area and infratemporal fossa more probably a neoplastic lesion- JNA.

Figure 3: Female with right nasal bleeding mass with intra operative picture showing right lateral rhinotomy approach with post operative specimen and clinical picture.

Case 3

A 19 year old male came to ENT OPD with c\o right nasal mass with nasal obstruction with nasal bleeding since 9 months, no h\o trauma, no h\o anosmia, no h\o fever\ cold\ cough, no h\o comorbidities. On local

examination: nose: a pale mass occupying the right nasal cavity seen in the anterior nares with extension to the right maxillary area.

Figure 4: Right bleeding nasal mass (hemangiopericytoma) with intra-operative incision picture and post operative specimen.

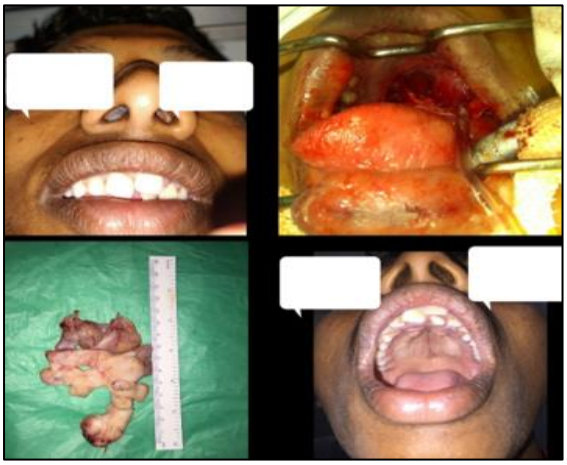

Figure 5: Right bleeding nasal mass in an adolescent male with intra-operative transpalatal approach (Wilsons procedure) and post operative specimen.

No e\o tenderness, minimal nasal discharge+, DNE was done: Right nasal cavity mass extending till the choana and posterior extent could not been seen. Patient was investigated further radiologically Ill defined enhancing soft tissue lesion seen arising from the right sphenopalatine foramen extending into the nasopharynx, occupying the right nasal cavity and extending to the choana. F\s\o – juvenile nasopharyngeal angiofibroma (Figure 2) and clinical diagnosis of JNA was achieved and patient was worked up for JNA excision under GA by transpalatal approach (Wilson's approach) and specimen was removed into without preoperative embolization with minimal blood loss intraoperatively (80 ml appoximately) and patient is on regular follow-up.

DISCUSSION

Hemangioma (Lobular hemangioma) with incidence: Only 51 cases have been reported till date with M:F = 1:3.It constitutes about 20% of all benign neoplasms of the nasal cavity. Common sites: septum (65%), lateral wall (18%), and vestibule (16%).[3] Nasal hemangiomas mostly arise from the soft tissues of the nasal cavity. (Figure 3) Haemangiomas are: predominantly capillary and are found attached to the nasal septum, cavernous haemangiomas, on the other hand, are more likely to be found on the lateral wall of the nasal cavity4 with tendency to grow in a lateral direction.[5] (Figure 3) Histology: capillary lobules that often surround a large central vessel, may have marked cellularity and frequent mitotic figures. Hemangiopericytoma- rare vascular tumor commonly involves the soft tissues of trunk and lower extremities occurring in seventh decade of life, presenting with epistaxis and nasal obstruction. Approximately 15% of all soft tissue HPCs occur in the head and neck region, mainly in the nasal cavity and paranasal sinuses. (Figure 4) While corticosteroid use, hypertension and pregnancy have been proposed as etiological factors in the development of HPC, this is not widely accepted. DNE - imaging studies and plan for pre-operative planning and embolization.[6] The treatment of choice: wide surgical resection and the risk of recurrence. The reported recurrence rate of HPC is quite varied, ranging from 7 to 20%, with an average time of recurrence of 6–7 years.[7] (Figure 4) Diffuse growth with fascicular, solid or focally whorled pattern of spindled or round / oval tumor cells that arrange themselves around prominent, small, thin walled submucosal blood vessels. Cells have variable cytoplasm and nuclei, indistinct cell borders, occasionally are multinucleated, minimal atypia, no necrosis, no / rare mitotic activity, vessels are prominent with staghorn appearance and perivascular hyalinization, often mast cells and eosinophils, surface epithelium is intact and usually respiratory. Juvenile nasopharyngeal angiofibroma-uncommon benign tumor, a locally aggressive tumor affecting adolescent males. This invasiveness and extensiveness lead to high recurrence rates of 0–57%.[8] Common sites are lateral wall of the nasal cavity, close to the superior border of the sphenopalatine foramen. It impinges on adjacent structures and causes pressure erosion of bone. (Figure 5) Chandler et al have proposed several staging systems for JNA. This helps to determine the tumor site and extent. Fisch classification, however, is currently accepted. Type I when the tumor is restricted to the nasal cavity and the nasopharynx without bone destruction, type II when the tumor invades the pterygomaxillary fossa and maxillary, sphenoidal and ethmoid sinuses with bone destruction, type III when the tumor invades the infratemporal fossa, the orbit, and the parasellar region but remains lateral to the cavernous sinus and Type IV when the tumor invades the cavernous sinus, the optic chiasma and the pituitary

fossa.[9] (Figure 5) Intricate mixture of stellate and staghorn blood vessels with variable vessel wall thickness ranging from single layer of endothelium to variable smooth muscle coat, irregular fibrous stroma (loose, edematous to dense, acellular), stromal cells are stellate fibroblasts with small pyknotic to large vesicular nuclei, larger vessels at base of lesion, smaller vessels with plump endothelial cells at growing edge of tumor, multinucleated stromal cells are common. (Table 1): showing that the hemangioma occurring more common with 06 (60.0), angiofibroma 03 (30.0) and hemangiopericytoma 01 (10) among benign nasal masses with bleeding which is comparable with the similar study of a study from a tertiary care hospital of India.

Limitations

The limitations of this study were the sample size could have been more (as the duration of study was only 3 years- and benign nasal masses presenting with nasal epistaxis is rare as such), embolization techniques were not practised as the availability was an issue.

CONCLUSION

Epistaxis is a common symptom and recurrent nasal bleeding requires precise clarification of the cause and exclusion diagnostics prior to therapy planning. It is important here to distinguish between locally induced bland epistaxis and symptomatic epistaxis. Because the symptoms frequently are not specific to any one disorder, imaging can be quite helpful in determining the site of origin and the involved adjacent structures and guiding the clinician's presurgical planning for those conditions for which surgical treatment is required. In most patients, the imaging characteristics and Histopathological examination can be used to substantially narrow the differential diagnosis, and occasionally they are characteristic, enabling the clinician to suggest a specific diagnosis.

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REFERENCES

1. Archontaki M, Stamou AK, Hajiioannou JK, et al. Cavernous haemangioma of the left nasal cavity. Acta Otorhinolaryngol Ital. 2008;28:309-11.
2. Enjiolras O, Mulliken JB. Vascular tumors and vascular malformations (new issues). AdvDermatol. 1997;13:375-423.
3. Hoffmann DF, Israel J. Intraosseous frontal hemangioma. Head and Neck. 1990;12:160-3.
4. Batsakis JG, Rice DH. The pathology of head and neck tumors: vasoformative tumors, part 9A. Head Neck Surg. 1981;3:231-9.
5. Engel T, Scorner W, Flex R, Witt H, Jahne V. Cavernous hemangioma of the maxillary sinus. 1997;38:342-4.
6. Bignami M, Dallan I, Battaglia P, Lenzi R, Pistochini A, Castelnuovo P. Endoscopic, endonasal management of sinonasal haemangiopericytoma: 12-year experience. J Laryngol Otol. 2010;124(11):1178-82.
7. Thiringer JK, Costantino PD, Houston G. Sinonasal hemangiopericytoma: case report and literature review. Skull Base Surg. 1995;5(3):185-90.
8. Szymanska A, Szymanski M, Czekajska-Chehab E, Szczerbo-Trojanowska M. Two types of lateral extension in juvenile nasopharyngeal angiofibroma: Diagnostic and therapeutic management. Eur Arch Otorhinolaryngol. 2015;272:159-66.
9. Fisch U. The infratemporal fossa approach for nasopharyngeal tumors. Laryngoscope. 1983;93:36-44.
10. Marietta H, Jurgen UGH, Ewa R. Endoscopically controlled laser therapy of recurrent epistaxis with the 940nm diode laser. Medical Laser Application. 2002;17:231-42.

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