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VICARIOUS PRESENTATION OF BLEEDING NASAL MASSES

ENT

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ABSTRACT

Background-Epistaxis being the commonest symptom, it's important to differentiate bland epistaxis from that secondary to benign or malignant lesions. Commonest cause is malignant nasal mass, however benign lesion advocates proper evaluation for diagnosis and appropriate treatment. **Methods-** Presenting series of five nasal mass cases with epistaxis. Thorough evaluation with detailed history, ENT examination, Nasal endoscopy, Radiological assessment, blood tests, Biopsy and histopathological examination was conclusive of specific diagnosis and treatment plan. **Result-** HPE concluded the diagnosis. **Conclusion-** Recurrent epistaxis with nasal masses warrants thorough evaluation for appropriate management preventing morbidity. Both benign and malignant nasal masses with epistaxis mandate precise diagnosis prior to appropriate surgical intervention and obviate misdiagnosis.

KEYWORDS

INTRODUCTION

Epistaxis is a frequently encountered symptom. It's important to differentiate frank epistaxis from epistaxis secondary to benign or malignant lesions. Obstructive nasal symptoms as in rhinitis and sinusitis are identical to those in early nasal malignancies with bleeding. Nasal masses present with nasal obstruction (48%), facial swelling (41%), nasal discharge (37%), epistaxis (35%), However benign lesions such as hemangiomas, juvenile nasopharyngeal angiofibroma, infective lesions like pyogenic granuloma (Archontaki, 2008)[1] masses present similarly and hence mandates proper diagnosis and appropriate treatment. Provisional diagnosis is with clinical and radiological assessment but final diagnosis is based on histopathological examination which clinches the diagnoses(Enjiolras , 1997)[2]. Presenting 5 clinical case series of nasal mass with epistaxis, wherein histopathological examination instigated diagnosis and treatment.

CASE SERIES

CASE-1 MIXED NASAL HEMANGIOMA

A 30 year old lady presented with unilateral nasal obstruction and frequent epistaxis since 2-3 months. There was no history of fall, trauma, and olfactory disturbance. Local and anterior rhinoscopic examination showed a pink, pale mass occupying the right nasal cavity measuring about 1*1 cm(Fig.1)

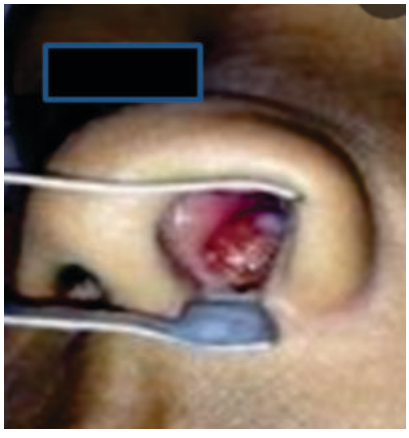

Figure 1- Anterior Rhinoscopy Showing Nasal Mass Arising From Lateral Wall Of Nose.

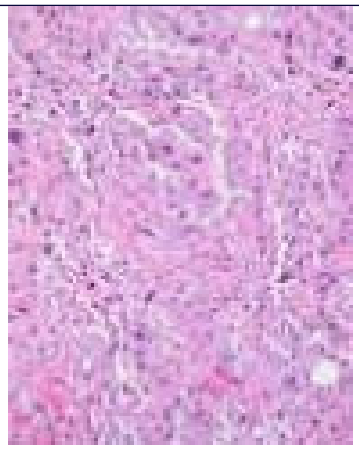

Figure 2-HPE.

It seemed to be arising from the inferior turbinate. No nasal dorsom or facial swelling. No evidence of tenderness, blood stains were present, with no active nasal bleed. The mass was non-tender, and not bleeding on touch. Functional assessment revealed decrease on the diseased side secondary mechanical obstruction compared to the normal side. DNE and CT PNS confirmed the clinical findings with no extension to choana and bony erosion. Nasal biopsy proved to be **mixed hemangioma**(Fig.2). Excision in toto with cauterization of base under GA performed. HPE which showed features s/o mixed hemangioma. Patient had no complaints on her follow -up visit.

CASE-2 NASAL ANGIOFIBROMA

A 40 year old gentleman presented with unilateral left sided nasal mass progressively increasing in size and nasal obstruction with 4-5 episodes of epistaxis for the past 2-3 months. It grew to protrude outside the nasal cavity. Epistaxis initiated by nasal manipulation and associated with minimal to moderate blood loss with spontaneous regression. There was no history of trauma, olfactory dysfunction, fever, cough, cold, weight or appetite loss or medical or surgical comorbidities apart from patient being a diabetic on oral medications with acceptable control.

Local clinical examination(Fig.3) confirmed by DNE of the nose showed a pinkish, friable 3*3cm, non-tender mass occupying the left

nasal vestibular region in the lateral wall of the nasal cavity (alar region) posterior limit as visualized anterior to the inferior turbinate with free posterior choana with minimal bleed on manipulation.

Figure 3- Bleeding Mass Left Lateral Wall

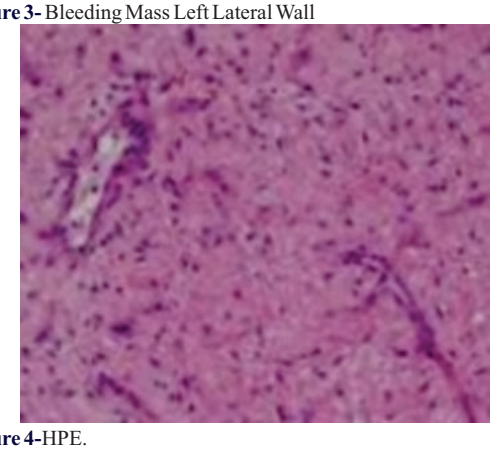

Figure 4-HPE.

Patient was investigated further radiologically; reported as an ill defined enhancing soft tissue lesion measuring about 3*3cm seen arising from the lateral wall of the left nasal cavity protruding out from the anterior nares . Rest of the study was normal. Patient was planned for a excision biopsy under GA with cauterization of base The surgery was done under general hypotensive anaesthesia with minimal blood loss. HPE reported **angiofibroma**(Fig.4) while the patient was comfortable on his follow-up visits.

CASE-3 INFLAMMATORY POLYP

A 20 year old female had presented to the emergency ward of our hospital in November 2021 with complaints of rhinitis since 2-3 days, occasional history of minimal nasal bleed usually preceded by digital manipulation and current history of sneezing out of a mass(Fig.5) from right nasal cavity during a violent sneeze followed by nasal bleed, which was associated with 3-5 ml of blood loss and stopped spontaneously.

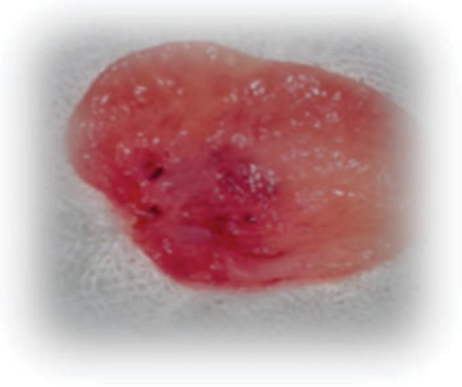

Figure 5- Sneezed out mass-AC Polyp

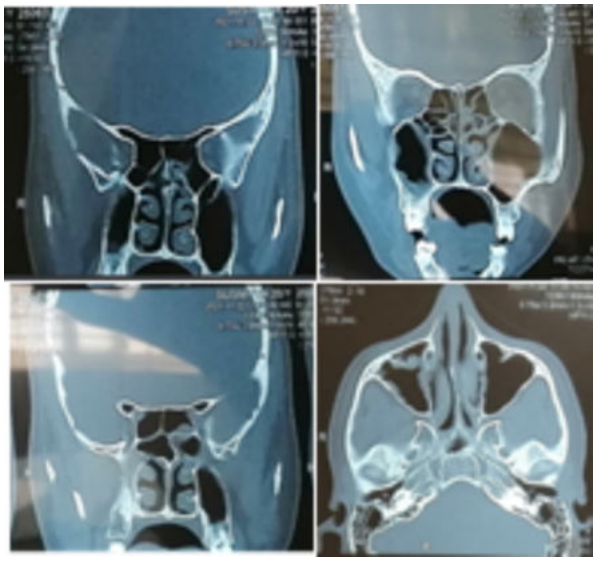

Figure 6- Plain CT-NAD

At the time of examination mucosa was pale with blood stains and no active nasal bleed. There was a history of allergic predisposition and unilateral nasal obstruction since 4-5 years with aggravation of symptoms on exposure to dust and cold. There was however no history of anosmia, cough, no history of comorbidities. Nasal examination showed no appreciable mass retained within the nasal cavity. The sneezed out mass was pinkish, fleshy in appearance, soft measuring about 3*0.5 cm vascular with well-defined borders with no discernable pedicle. The mass was sent for HPE, CT-PNS(Fig.6), DNE study was done for the post "sneezing out mass" episode which were normal.

The HPE showed bits of tissue lined by nasal mucosa with subepithelial chronic inflammatory cells infiltration, mucus glands and congested blood vessels and a final impression of inflammatory polyp. On her follow up visit, she was asymptomatic and comfortable. This was a coincidental case of sino-nasal polyposis in its initial stages.

CASE-4 RIGHT NASAL CAVITY EPITHELOID HEMANGIOENDOTHELIOMA

A 50-year gentleman presented with a 2 months history of nasal obstruction and intermittent epistaxis. The nasal obstruction was insidious in onset, gradually progressive and occasional hampered breathing. Nasal bleed was preceded by violent sneezing, lasted for 1-2 minutes associated with 2ml of blood and spontaneous to regress. He had visited local clinics several times for treatment which was ineffective. No history of trauma, fever, nasal picking, loss of appetite, weight loss, abdominal symptoms, back pain ear or oral complaints were noted. He denied any history of smoking or alcohol consumption. Unremarkable past, family and drug history. The general and systemic physical examination was normal.

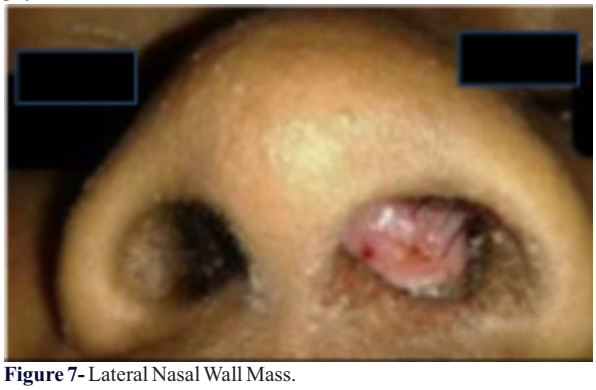

Figure 7- Lateral Nasal Wall Mass.

Local examination(Fig.7) of the nose showed dorsal fullness. Anterior rhinoscopic examination of Left nasal cavity showed fleshy polypoidal whitish-grey mass occluding the nasal cavity. Congested mucosa, dried blood stains, bilaterally pale and hypertrophied IT, no active bleed. Posterior Rhinoscopic examination-WNL, Smell test, Cottles

test- Negative, Cold spatula test-Decreased fogging noticed on the left side. PROBE TEST-Single, firm, fleshy non tender mass seen arising from the lateral wall of the left nasal cavity, not bleeding on touch and probe could be passed all around except laterally. PNS uninvolved.

DNE revealed a firm, fleshy mass seen arising from the lateral wall of the left nasal cavity,measuring 1* 1 cm, located anterior to the uncinate process in the left nasal cavity, not bleeding on touch .

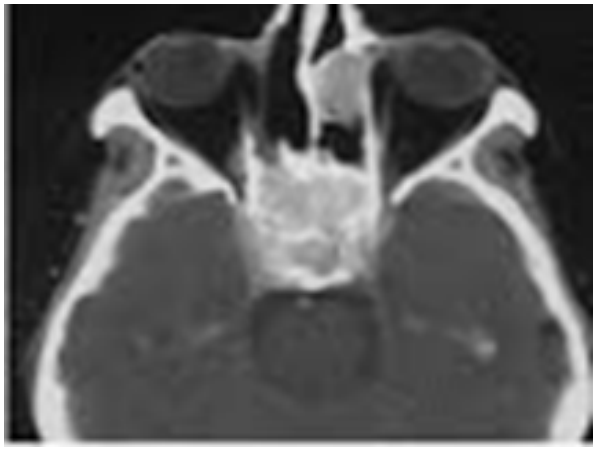

Figure 8- CT Delineating Mass With Minimal Erosion.

CT(Fig.8)- demonstrated increased soft-tissue density anterior to the left middle turbinate, measuring about 24 by 12 mm in the left nasal cavity with minimal bony erosion. Excision biopsy was done and HPE showed- Tumor tissue arranged in cords and sheets. With round to oval cells, moderate nuclear pleomorphism and hyperchromatic nucleus. Many vascular channels interspersed with tumor cells, mitotic figures- 0-2/10 hpf. HPE final report was suggestive of **epitheloid hemangioendothelioma**. He was advised immunohistochemistry for further study specifically keratin, vimentin, FLI 1 and CD34. He was advised surgical management but was lost on follow up.

CASE-5 RECURRENT NASAL MYXOMA A 25 year old lady came to ENT OPD with case of right nasal mass with nasal obstruction with episodes of intermittent nasal bleeding since 6 months, anosmia. There was no history of trauma, fever, cold, cough and no history of comorbidities. She gave history of nasal surgery in the past - details not available. Biopsy report(Fig.9) from the last surgery was suggestive of myxofibroma. On local examination of nose showed a pale whitish-grey polypoidal mass occupying the floor of the right nasal cavity adjoining the anterior nares. No discernable facial swelling. Minimal nasal discharge with moderate DNS to left and no tenderness. CT-PNS showed an ill-defined enhancing soft tissue lesion seen isolated involving right nasal cavity with no posterior or PNS extension. Patient was worked up for excision biopsy under LA. She is asymptomatic and comfortable on follow-up visits.

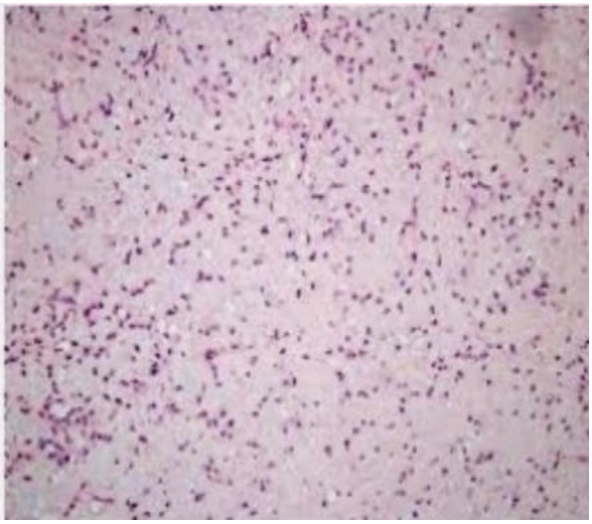

Figure 9- HPE Showing Myxomatous Tissue

DISCUSSION

Epistaxis is a common symptom encountered in ENT practice with multivariate in etiology. They may also be seen in cases of sinonasal masses which may be congenital, infective, inflammatory or developmental, traumatic or neoplastic. Nasal masses with concomitant epistaxis usually points to malignancy. However benign naasal masses may also present with nasal bleed. Sinonasal masses have a male predilection. Haemangiomas are not very commonly seen in the nasal cavity, however when they do, they are commomly seen in the septum (65%), lateral wall (18%), and vestibule (16%)(Webb ,2000)[3] . Predominantly capillary type is seen on the nasal septum whereas lateral wall shows cavernous hemangiomas.(Batsakis ,1981)[4]In our case, the HPE report showed it to be a mixed nasal hemangioma, the type as well as the location is unusual for a nasal hemangioma. A clinicopathological study of haemangioma from Japan reported an usual origin of capillary type from the nasal septum and cavernous type from the lateral nasal wall(Iwata,2002) [5]. Histopathological examination is conclusive in diagnosing the polypoid lesions by aetiology and cellular details. It is the only means of determining the nature of the disease, i.e. inflammatory or neoplastic. Radiological investigations may also help in understanding the type of pathology, extension of lesion and associated sinus pathology. Most of non-neoplastic and benign neoplastic nasal masses require surgical excision, while malignant neoplastic nasal masses require wide surgical excision, radiotherapy or chemotherapy either alone or in combination. Regular follow-up is necessary for early detection of recurrence or metastases. FESS offers a definite advantage over other procedures and is now the preferred modality(Lathi,2011) [6]. Complete surgical resection followed by adjuvant radiotherapy is an effective and safe approach in the treatment of sinonasal cancer and associated with better survival. However, radiotherapy was the only mode of treatment offered to patients in our clinic.

The term hemangioendothelioma describes several types of vascular neosplasms and includes both benign and malignant growths. They tend to show "borderline" behavior, intermediate between entirely benign hemangiomas and highly malignant Hemangioendotheliomas and angiosarcomas(Weiss,1986)[7]. They are caused by abnormal growth of blood vessel cells, although the exact underlying cause for the abnormal growth is unknown. Most common sites include liver or lung. They usually grow slowly but have the potential to metastasize. The three types are spindle cell intralymphatic(Dabskahemangioma ; papillary tumor); pseudomyogenic (epithelioid retiform sarcoma; Kaposi form like hemangioendothelioma). Immunohistochemistry supplements the diagnosis along with history and clinical examination. The positive staining for factor VIII is helpful in differentiating EHE from carcinoma(Weiss,2001)[8] Treatment is primarily surgical. Factors for sinonasal carcinomas warranting poorer prognosis –involvement of dura, cribriform plate, pterygomaxillary fossa and sinuses(Dulguerov,2001)[9].

Nasal polyps are benign abnormal mucosal protrusions associated with nasal mucosa or paranasal sinuses. They appear as fluid filled semitransparent tear drop-like structures. The prevalence in the adult population is estimated to be around 1-4%(Casale,2011)[10]. Proposed mechanisms include, but are not limited to increase in tubuloalveolar glands, structural defects like deviation of the nasal septum, mucosal oedema, mucosal inflammation , and epithelial rupture. More recently the role of inflammatory mediators like Interleukins (3,5,8), transforming growth factor beta, basic fibroblast growth factor, leptin, and HPV-11 have been evaluated in it(Jang,1999)[11]. Inflammatory sinonasal polyps are assorted into main five variants: edematous, glandular, fibrous, cystic and angiomatous polyp. Clinically, patients may experience a gradual obstruction of the nasal cavity, loss of smell sensation, nasal discharge or epistaxis. There are other conditions which need to be differentiated like inferior turbinate hypertrophy, inverted papilloma, septal papilloma, big mucosal blob, olfactory neuroblastoma, rhinosporidiosis, rhinoscleroma, juvenile nasal angiofibroma, or angiofibroma of the septum.

Nasopharyngeal angiofibroma, famous by its many names is a locally invasive but histologically benign vascular entity that is known to arise from the superior margin of the sphenopalatine foramen. Incidence wise commonly affects the adolescent males. Patients with JNA usually present with nasal obstruction, episodes of epistaxis which may be torrential. Once the tumor invades the nose, orbit, cheek region or brain it may present with complications such as diplopia and facial dysmorphim(Raphael,2008).[12] There are various staging systems.

Radkowsky's staging system is one of the most frequently used system(Radkowski,1996)[13]. Diagnosis is by history, clinical examination supplemented with radiological assessment(DSA) The management of this locally aggressive vascular tumor is primarily surgical. To reduce intraoperative hemorrhage, preoperative embolization is considered. It may be approached externally or endoscopically(Dulguerov,2001)[9] .Preoperative embolisation of tumor may be of some use in reducing intra-operative bleeding.

Accounting for less than 0.5 % of all nasal and PNS tumors, myxomas are benign, slow growing connective tissue tumors. They may occur throughout the body cited in the heart, soft tissues, and bones. They originate from the mesenchyme(DeFatta,2006)[14]

In the nasal cavity and paranasal sinuses, they present with complaints of nasal obstruction, nasal bleed, facial swelling or distortion and sometimes bony erosion(Batsakis,1981).[4]Grossly they appear as greyish white, smooth and rubbery masses appears gelatinous on resection. They tend to be locally infiltrative. Histologically, myxomas are hypocellular tumors comprising of stellate and spindle cells scattered in a hyaluronidase rich myxoid stroma. Surgery is choice of management for these tumors(Yin,2007)[15] and the role of RT is not established and is reserved at present for residual disease. Recurrence is commonly seen due to the infiltrative nature. Lack of capsule of these tumors warrants complete excicion. Hence ensuring clear surgical resection margins is of essence.

CONCLUSION

Nasal masses with recurrent nasal bleed warrant thorough evaluation, appropriate planning and management preventing morbidity. Benign and malignant lesions may present with epistaxis resonates precise diagnosis prior to therapy. Radio-imaging reinforces the details about extent, involvement of other structures and impending complications thereby guiding the management. But histopathological assessment clinches the specific diagnoses.

This aids rare cases with unusual presentations do not get misdiagnosed planning early, thereby preventing further deterioration.

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Conflict Of Interest: None declared

Ethical Approval: Taken

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