Case Report

Ticking time bomb inside the nose: A case of juvenile nasopharyngeal angio fibroma

Anand Raju[1]*, Sivakami.RK[2], Thushita Nivasini.S[2], Mano Leonie Divya[2], Satheesh G[3]

[1]Head of the Department – ENT, Kauvery hospital, Radial road, Chennai, Tamil Nadu
[2]Associate Consultant – ENT, Kauvery hospital, Radial road, Chennai, Tamil Nadu
[3]Lead Consultant – Interventional Radiology (Neuro), Kauvery hospital, Radial road, Chennai, Tamil Nadu
*Correspondence

Abstract

Background: Juvenile Nasopharyngeal Angiofibroma (JNA) is a rare, highly vascular, and histologically benign tumor primarily affecting adolescent males. It originates in the nasopharynx, often presenting with nasal obstruction and epistaxis, and exhibits significant local invasiveness, potentially extending into adjacent sinuses and the skull base. Diagnosis is usually established through imaging techniques like MRI and CT scan, with surgical resection being the primary therapeutic intervention We report a case presentation of JNA in 18 year old male.

Key Words: Juvenile nasopharyngeal angiofibroma (JNA); Holman–Miller sign; Medial maxillectomy; Nosebleed

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1. Introduction

Juvenile nasopharyngeal angiofibroma (JNA) is a rare, benign but highly vascular and locally aggressive tumour seen almost exclusively in adolescent males. It commonly arises near the sphenopalatine foramen and presents with epistaxis and nasal obstruction. Despite its benign histology, JNA behaves like a vascular "time bomb," with the potential for sudden, profuse, and life-threatening bleeding if left untreated.

2. Case Presentation

An 18-year-old male presented with nasal blockage and only two episodes of mild epistaxis over six months. Diagnostic nasal endoscopy revealed nasopharyngeal mass. Contrast-enhanced CT (CECT) showed a vascular lesion arising from the right sphenopalatine foramen without erosion or extension.

A diagnosis of Juvenile nasopharyngeal angiofibroma was explained, and early surgical excision was strongly advised due to the risk of massive bleeding. However, the patient did not return for follow-up.

The family later revealed that reassurance from unverified online health information and the absence of further nosebleeds led them to defer medical advice.

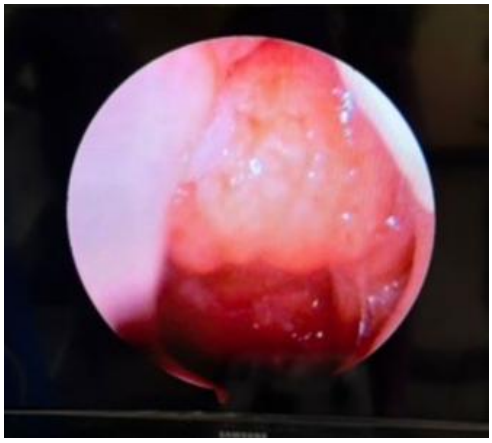

Fig (1): Endoscopic picture during first visit with lesion in nasopharynx without any extension or erosion.

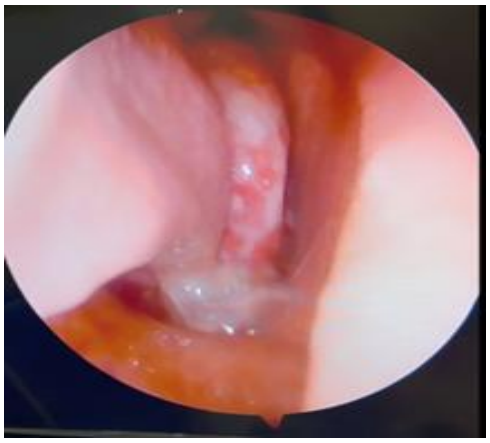

Fig (2): endoscopic picture during secong visit showing large vascular mass in the nasal cavity with extesion and erosion.

Six months later, the patient re-presented following a sudden, heavy episode of epistaxis with worsening nasal obstruction. On examination, a huge, smooth, pulsatile mass was seen medial to the middle turbinate on the right side. The left middle turbinate appeared polypoidal. A pulsatile mass with discharge was noted in the nasopharynx. Otoscopic examination revealed right-sided serous otitis media.

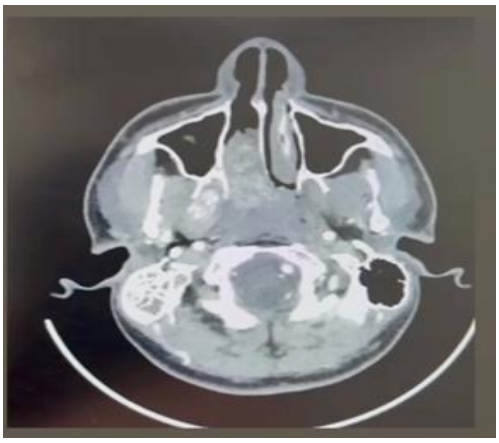

Fig (3): CECT paranasal sinus showing large mass extending to the pterygopalatine fossa and medial infratemporal fossa.

Repeat CECT showed a large vascular mass measuring 46 × 43 × 36 mm centred at the right sphenopalatine foramen, occupying the nasopharynx and right nasal cavity, with extension into the pterygopalatine and medial infratemporal fossae. Anterior bowing of the posterior maxillary wall (Holman–Miller sign) was noted.

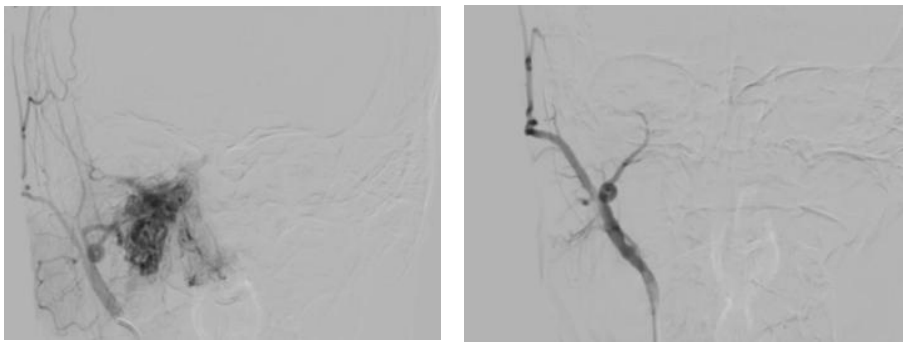

Fig (4): Pre and post embolization pictures. Right internal maxillary artery and facial artery branches were embolized

Pre-operative embolization of major feeding vessels was performed. The patient subsequently underwent right medial maxillectomy with complete JNA excision. Intraoperatively, the tumor had eroded the posterior maxillary wall, pterygoid plates, and orbital floor. The sphenopalatine artery was ligated, and the mass was excised in Toto using Coblation. Haemostasis was achieved and nasal packing placed.

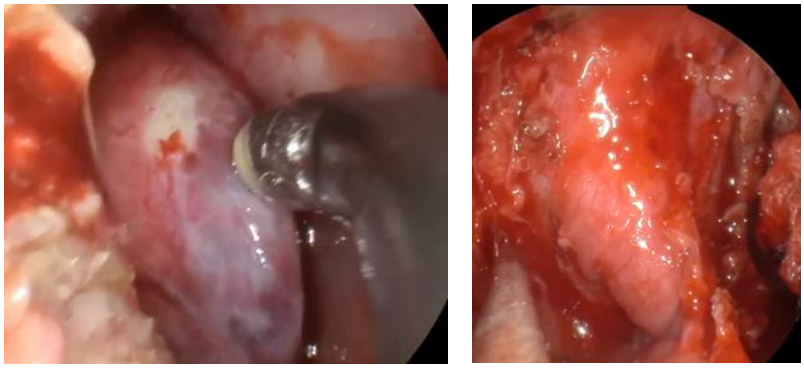

Fig (5): Intraoperative pictures of juvenile nasopharyngeal angiofibroma, a): Lesion involving the nasal cavity, b): Involvement of right pterypalatine fossa and medial infratemporal fossa

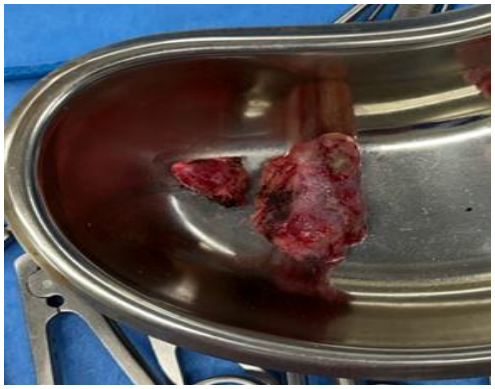

Fig (6): picture of mass lesion following removal

3. Conclusion

This case highlights how deceptively mild early symptoms and false reassurance from online sources can delay life-saving treatment of a highly vascular tumour with catastrophic bleeding potential.

4. Clinical Take-Home Message

- Even a few mild nosebleeds in adolescent boys can signal a dangerous vascular tumour.
- Juvenile nasopharyngeal angiofibroma behaves like a silent "time bomb."
- Reassurance from unverified online health information can dangerously delay proper care.
- Early diagnosis, timely surgery, and pre-operative embolization are critical for safe outcomes.