

## Case Report

# Extensive nasopharyngeal angiofibroma – case report

M Alamgir Chowdhury<sup>1</sup>, Mousumi Malakar<sup>2</sup>, SM Golam Rabbani<sup>3</sup>, Naseem Yasmeen<sup>4</sup>, Shahidul Islam<sup>4</sup>

### Abstract:

*Juvenile nasopharyngeal angiofibroma is a benign vascular neoplasm, but it is locally aggressive. This accounts for less than 0.5% of all the neoplasm in the head & neck region in the male population only. Here we report a case of 10-year-old boy with a blackish red smooth polypoidal mass in the nasal cavity, with history of recurrent epistaxis. On physical examination it was suspected as nasopharyngeal angiofibroma. We removed it totally by lateral rhinotomy approach. And the diagnosis was nasopharyngeal angiofibroma on histopathology.*

**Key words:** Angiofibroma, Nasopharyngeal.

### Introduction:

Juvenile angiofibroma is a benign mesenchymal tumour of young men specially affects pre-pubertal & adolescent males<sup>1</sup>. Usually it arises from the posterolateral wall and roof of the nose and nasopharynx. Though it is an intricate mixture of blood vessels & fibrous stroma, there is frequent attack of epistaxis (nose-bleeds) or blood tinged nasal discharge is present. There is also nasal obstruction & rhinorrhoea, otitis media or conductive hearing loss due to Eustachian tube obstruction, eye pain etc<sup>2</sup>. Diplopia is secondary to erosion of cranial vault specially orbit. Treatment of Juvenile nasopharyngeal angiofibroma is mainly surgery. There are various surgical approach such as: transpalatine, transpalatine & sublabial (Sardan's approach), extended lateral rhinotomy via facial incision or degloving approach, extended

denkens approach, extracranial – intracranial and Infratemporal fossa<sup>3</sup>.

Transnasal endoscopic resection (FESS) under hypotensive general anesthesia is preferable which needs surgically expertise<sup>4,5</sup>. Juvenile nasopharyngeal angiofibroma (JNA) is suggested by the classic triad of epistaxis, nasal obstruction & presence of nasal mass. All the patients are male. Intra-operative blood loss is massive so blood transfusion is mandatory. Radiotherapy, embolization was other options of treatment, but not popular now-a-days<sup>6</sup>.

### Case History:

A 10-year-old boy came to otolaryngology department of the Medical College for Women & Hospital, Dhaka with the complaints of recurrent bleeding per nose & headache for two years, which was unilateral only on right side of head. Clinically we found mass in the both nasal cavities, which bleeds on touch. There was also proptosis of the right side. Patient also complained impaired hearing in right ear for one year. Probably it was due to obstruction of Eustachian tube. He was provisionally diagnosed as JNA. We planned for surgery under general anesthesia. Right lateral rhinotomy was done & tumour was removed completely. The tumor involved nasopharynx and extended to bilateral nasal cavity, sphenoid & ethmoidal sinuses, & right pterygo-palatine fossa. Figure 1 shows photograph of the patient after surgery with both anterior and posterior nasal packs. There was bone erosion over the base of the skull, lateral wall & floor of right orbit & right maxillary sinus. The tumour was removed en-block. After operation

1. Professor and Head, Otolaryngology - Head & Neck Surgery, Medical College for Women & Hospital, Uttara, Dhaka
2. Medical Officer, Otolaryngology - Head & Neck Surgery, Medical College for Women & Hospital, Uttara, Dhaka
3. Registrar, Otolaryngology & Head Neck Surgery, Medical College for Women & Hospital, Uttara, Dhaka
4. Assistant Professor, Otolaryngology - Head & Neck Surgery, Medical College for Women & Hospital, Uttara, Dhaka

**Address of Correspondence:** Prof. Dr. M. Alamgir Chowdhury, Professor and Head, Otolaryngology, Head & Neck Surgery, Medical College for Women & Hospital, Uttara, Dhaka, Bangladesh, E-mail: [jaldi@dhaka.net](mailto:jaldi@dhaka.net)

anesthetic recovery was uneventful. Figure 2 showed photograph of the patient on the sixth post operative day. Five units of fresh blood were transfused during operation. Specimen was sent for histopathology. Report was nasopharyngeal angiofibroma.



**Fig.-1:** Photograph of the patient after surgery with both anterior and posterior nasal packs.



**Fig.-2:** Photograph of the case on the sixth post-operative day.

### Discussion:

The name angiofibroma implies that it is composed of vascular and fibrous tissue<sup>5</sup>. Though JNA is a rare tumour, but it is the commonest of all benign tumours of nasopharynx. It usually affects adolescent males in the second decade of life<sup>6</sup>. Our case is a 10-year-old boy. Exact cause is unknown, but it is thought to be androgen hormone (testosterone) dependent. Such patients have a hamartomatus nidus which is a benign malformation of vascular tissue in the nasopharynx & this activated to form angiofibroma when male sex hormone appears<sup>7-8</sup>. This occurs mostly in the endothelium lined spaces where no muscle coat is present so the vessels lose the ability to contract & causes torrential bleeding in the form of profuse recurrent epistaxis. Patient may be markedly anaemic due to repeated & severe bleeding per nose. The mass arising from nasopharynx grows progressively causing nasal obstruction & nasal speech due to the presence of the mass in the post nasal space. Due to obstruction of Eustachian tube conductive hearing loss & serous otitis media may occur. The nasopharyngeal mass is sessile, lobulated, smooth & may obstruct one or both choanal aperture. It is pink or purplish in colour but blackish red if infected. It causes broadening of nasal bridge, proptosis & swelling of the cheek, sometimes cranial nerves are affected in advanced stage.

Several imaging studies such as x-ray soft tissue nasopharynx lateral view, x-ray of paranasal sinuses, CT scan of the PNS, magnetic resonance imaging (MRI) & even carotid angiography may be done to show the extension of the tumour & to identify its vascularity & feeding vessels<sup>9,10</sup>. In our case CT scan yielded the extension of the tumour. Diagnosis mainly based on clinical picture. Surgical excision is the treatment of choice. We removed the tumour through lateral rhinotomy approach and removed the tumour en-block. We decided lateral rhinotomy incision as it gives wide exposure and is generally preferred for tumour excision with its extension.

There is risk of bleeding during surgery few bags of blood pre-operatively should be ready for transfusion. Pre-operative radiation or embolization helps to reduce vascularity but not generally practised<sup>11, 12</sup>. Patient was fine till the last follow-up.

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