CASE REPORT

NASOPHARYNGEAL ANGIOFIBROMA. A CASE SERIES

G. Revanth Kumar Reddy¹, P. Narayana Rao²,

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ABSTRACT: - INTRODUCTION: Juvenile Nasopharyngeal Angiofibroma is a rare tumour affecting young adults. This is a case series of five cases operated at Govt. General Hospital (GGH), Guntur, Andhra Pradesh. **MATERIAL AND METHODS:** Five cases of JNA operated at GGH, Guntur from 2009 to 2011 are presented. All patients were adolescent males and complained of epistaxis and nasal block. They were evaluated pre-operatively by angiography and embolized. Four patients were treated by lateral rhinotomy and one by endoscopic approach.

RESULTS: All patients were treated successfully with minimal intra op and post op complications. Bleeding was less due to pre op embolization of all the cases.

CONCLUSION: Pre-operative embolization has resulted in less complications and success rate of surgery is also good.

KEYWORDS: Angiofibroma, embolisation

INTRODUCTION: Juvenile Nasopharyngeal Angiofibroma (JNA) is a rare benign tumour that occurs almost only in adults and young male patients [1,2,3,4]. It represents 0.05 to 0.5% of all head and neck tumours [5,6]. Incidence in India and Egypt is slightly higher than in USA and Europe. JNA is locally aggressive, slow growing tumour with high vasculature and tendency to persistence and recurrence [2, 3, 7]. JNA originates from vascular plexus that remains after involution of first branchial arch. Therefore in most cases, tumour receives blood supply from external carotid artery.

The tumour originates in nasopharynx in the superior part of sphenopalatine foramen [2,6,8,9,10]. The tumour spreads in the sub mucosal plane medially entering the nasal cavity or laterally towards pterygopalatine and infra temporal fossae. Displacement of posterior maxillary wall by the tumour –Holman-Millers sign is pathognomonic for JNA.

Growth into the orbit is encountered roughly in every third patient [2]. Tumor spreads into pterygopalatine fossa through inferior orbital fissure and from ethmoid labyrinth through medial orbital wall. As a result, proptosis occurs and visual and oculomotor disorders may develop. Specific feature of spread into the orbit is displacement of tissues without their infiltration. From infratemporal fossa, the tumor can spread to middle cranial fossa; growth into sphenoid sinus and further bony destruction lead to involvement of cavernous sinus and chiasmatic-sellar region [11]. JNA, in most cases, spreads through paranasal sinuses by "pushing" of bony walls without destruction, but intracranial involvement is associated with destruction of skull base

MATERIALS AND METHODS: Five adolescent males of angiofibroma who presented to Govt. General Hospital, Guntur during years from 2009 to 2011 was studied. The duration of disease prior to admission was between three months to one year. All the patients had the disease extending into the nasal cavity and nasopharynx with one patient who had minimal disease confined to the nasal cavity. In all the patients, pre-operative angiographic examination and imaging studies were

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performed and embolization was done. Surgical removal of the tumour was done by lateral rhinotomy approach in four cases and endoscopic excision in one case.

RESULTS: Four cases were operated by lateral rhinotomy approach and one case was operated by endoscopic endonasal excision. All the patients recovered well and they had no post-operative complications. There was no post-operative residual disease or recurrence during the follow up period of two years.

DISCUSSION: Selection of approach to JNA is based not only on surgeons experience but also on the number of criteria: visualization of tumour, possibilities of hemostasis, absence of facial scars and deformities and influence on growth of facial skeleton [12]. In our hospital, lateral rhinotomy is the approach most commonly used. Treatment of angiofibroma poses a surgical challenge due to its vascularity. Pre-operative embolization is an effective method of reducing the vascularity. In all the five cases there was no intra-operative bleeding and the tumour was delivered successfully. Endoscopic approach increases the visualization making this a favorable approach for localized tumours and to look for blind zones that are obscured for direct view.

The amount of blood loss during surgery was minimal. Post-operative complications were minimal and a contrast MRI was taken after six months. There was no sign of recurrence or residual disease. All the patients had good quality of life and no nasal complaints.

CONCLUSION: Treatment of nasopharyngeal angiofibroma is surgical excision. Bleeding is the most common complication during surgery of this highly vascular tumour. Pre-operative embolization significantly reduces bleeding and is recommended in all cases of angiofibroma. Lateral rhinotomy is a safe procedure and can be performed safely. Endoscopic procedure increases the visualization and extent of surgical excision.

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AUTHORS:

1. G. Revanth Kumar Reddy
2. P. Narayana Rao

PARTICULARS OF CONTRIBUTORS:

1. Post- Graduate, Department of ENT, Guntur Medical College, Guntur.
2. Professor & Head of the Department, Department of ENT, Guntur Medical College, Guntur.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:

Dr. G. Revanth Kumar Reddy
Post graduate in ENT
GGH, GUNTUR, Andhra Pradesh.
Email- revanthgangasani@gmail.com

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