Angiofibroma - a study of 22 cases at Allied Hospital Punjab Medical College, Faisalabad.

Muhammad Ali Tirmizey * Imtiaz Ahmad* Babar Rafiq Khan* Muhammad Hanif* Muhammad Saleem* Ehsaan Ibrahim*

ABSTRACT
Objective: The Primary objective of the study was to study the presentation of Angiofibroma of Nasopharynx in Faisalabad ppoand to compare the results of various treatment modalities. DESIGN: Prospective comparative study: SETTINGS: The study was carried out at the department of ENT & Head & Neck Surgery Allied Hospital Faisalabad, a tertiary care hospital. PERIOD: June 2001 – June 2006. PATIENTS AND METHODS: A study of 22 cases of Angiofibroma including all cases during the 5 years was carried out. All the patients were admitted. Detailed history, physical examinations and investigations were done. CT Scan with contrast was done in all cases and in some selected cases, MRI was also done in some cases. RESULTS: All the patients were male between 10 – 25 years of age. All the presented with epistaxis (100%). Other features included, nasal Obstruction, nasal discharge, orbital patients proptosis, mass in the nose and obvious deformity. All the patients underwent surgical excision except two, which were found inoperable. In 3 patients, tumour was excised by transpalatal approach. In 3 patients, Transnasal – Maxillary approach using Weber Fergusson,s incision was done and in 14 patients, Lateral Rhinotomy was used. CONCLUSIONS: Angiofibroma is a difficult condition to deal with. Any patient with slightest suspicion must be thoroughly investigated, as early diagnosis makes huge difference in outcome. Surgical excision is the treatment of choice. CORRESPONDENCE: Allied Hospital Punjab Medical College, Faisalabad. Telephone Res. 0418725300 Mobile 03216653153. Email. Afzal2@fsd.comsats.net.pk

INTRODUCTION
Angiofibroma is one tumour, the treatment of which always produces anxiety in the mind of the surgeon. It is benign yet biologically aggressive tumour. The tumour has primary attachment to the lateral wall of the nasopharynx and it has expansile growth and involves the surrounding regions by expansion. Spontaneous regression is doubtful and cannot be relied upon. The tumour is easy to diagnose as the triad of features, repeated epistaxis, nasal obstruction and anaemia in an adolescent male leaves little doubt about the diagnosis but it is difficult to treat. The exact aetiology is unknown but fibroblastic theory, Estrogen-androgen imbalance theory and Hamartomatous origin theory are proposed. The tumour has Primary attachment which is broad based from the posterolateral wall of nasal cavity and adjoining superolateral Nasopharyngeal wall.
Blood supply to the tumour is mainly from Internal maxillary, Ascending pharyngeal and from internal carotid artery. Venous drainage is to Vertebral Veins, veins following arteries and multiple unnamed veins. Today, CT scanning and MRI are the most commonly used modalities for imaging of JNA. The diagnosis is usually based on the imaging and the physical examination findings. Because of its vascular nature biopsy of these lesions is contraindicated. The commonly used classification system was established by Fish in which grade 1, being confined to the nasopharynx; grade 2 being into the pterygomaxillary fossa or into the sinuses; grade 3 being into the infratemporal fossa with and without intracranial involvement and grade 4 being intracranial intradural involvement. The management for Angiofibroma is primarily surgical. Due to advancements in preoperative embolization, improved skull base surgical approaches and microsurgical techniques, surgery is usually still the mainstay for initial therapy; however, radiotherapy and other modalities have been described.

Fagan 1997 advised that for smaller tumors confined to the nasopharynx, nasal cavity, ethmoids or sphenoids an endoscopic approach may be attempted. Transpalatal approaches have been described. We may do a transfacial or mid-faced degloving approach and this can even be extended using Le Fort I osteotomies. We may do a lateral rhinotomy, medial maxillectomy approach or infratemporal fossa and facial translocation approach as well. For more extensive lesions involving the infratemporal fossa, the medial cavernous sinus, middle cranial fossa, more extensive approaches including the infratemporal fossa approach and the facial translocation approach or an extended Le Fort I, mid-faced degloving approach has been described.

All cases were treated by surgical excision except in inoperable cases in which the tumour has gone intradural and intracranial especially involved the contents of cavernous sinus in which radiotherapy is the only option.

**PATIENTS AND METHODS**

A study of 22 cases of Angiofibroma including all cases during the 5 years between June 2001 – June 2006 was carried out. All the patients were admitted. Detailed history, physical examinations and investigations were done. CT Scan with contrast was done in all cases and in some selected cases MRI was also done in some cases. All cases were treated by surgical excision except 2 cases in which radiotherapy was given.

**TABLE-I**

<table>
<thead>
<tr>
<th>AGE</th>
<th>NUMBER</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>11-20</td>
<td>19</td>
<td>86.6%</td>
</tr>
<tr>
<td>21-30</td>
<td>3</td>
<td>13.63%</td>
</tr>
<tr>
<td>31-onwards</td>
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<td>0%</td>
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</table>

**TABLE-II**

<table>
<thead>
<tr>
<th>AGE</th>
<th>NUMBER</th>
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</tr>
</thead>
<tbody>
<tr>
<td>MALE</td>
<td>22</td>
<td>100%</td>
</tr>
<tr>
<td>FEMALE</td>
<td>0</td>
<td>0%</td>
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**TABLE-III**

<table>
<thead>
<tr>
<th>AGE</th>
<th>No.</th>
<th>PERCENTAGE</th>
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</thead>
<tbody>
<tr>
<td>Epistaxis</td>
<td>22</td>
<td>100%</td>
</tr>
<tr>
<td>Nasal Obstruction</td>
<td>22</td>
<td>100%</td>
</tr>
<tr>
<td>Anemia</td>
<td>22</td>
<td>100%</td>
</tr>
<tr>
<td>Nasal discharge</td>
<td>20</td>
<td>90.90%</td>
</tr>
<tr>
<td>Facial deformity</td>
<td>6</td>
<td>27.27%</td>
</tr>
<tr>
<td>Orbital proptosis</td>
<td>6</td>
<td>27.27%</td>
</tr>
<tr>
<td>Cheek swelling</td>
<td>4</td>
<td>18.18%</td>
</tr>
<tr>
<td>Visible mass in nasal cavity</td>
<td>20</td>
<td>90.90%</td>
</tr>
<tr>
<td>Visible mass in post.rhinoscopy</td>
<td>20</td>
<td>90.90%</td>
</tr>
<tr>
<td>Features of secretory otitis media</td>
<td>14</td>
<td>63.63%</td>
</tr>
<tr>
<td>Rhinolalia Clausa</td>
<td>10</td>
<td>45.45%</td>
</tr>
</tbody>
</table>
Angiofibroma is one tumour which is always a diagnostic and therapeutic challenge. In this prospective study we treated 22 cases. The mean age of presentation in our study is 15 which compares favourably with other studies [2,5,12,17,18]. In some studies the tumour presented in adults as well [2,5,17]. All the patients were male as in most of the studies, however females have also been reported in world literature (Lecture - Janet Lee). Epistaxis (100%), nasal obstruction (100%) and intranasal mass (91%) were the most common clinical features as seen in most of the studies. In our study we received relatively advanced cases as early diagnosis is difficult due to illiteracy and poor socioeconomic conditions. So the features of advanced disease, facial deformity, infratemporal fossa mass, headache and proptosis were not infrequent in our study. CT scan with contrast following positive clinical features was the mainstay of diagnosis in our study. The biopsy was not done in any case. Most of the tumours (14 -63.6%) were of grade II. Only 3 (13%) cases were diagnosed at Grade I while other 5 (23%) cases belonged to grade III and grade IV. This compares favourably with other studies done in Pakistan 16. However the grade I tumours are observed more frequently in developed countries [6,8,10,27,30]. Lateral Rhinotomy was the main surgical approach and we did transpalatal approach in only 3(13.6%) cases. Transnasal – maxillary using Weber Fergusson’s incision was used in 3(13.6%) cases. Isteraj et al. [16] used transpalatal approach in most (83%) of the cases which were combined with sublabial incision in some cases. We believe that lateral Rhinotomy is a better approach as most of the grade I and II tumours can be easily approached by this technique and this may be extended to transnasal maxillary approach by extending the incision for grade III tumours. Only 2 (9%) cases which were declared inoperable were treated by radiotherapy. The complication rate in our cases was much less as
compared to other studies. The recurrence was also quite less after a follow-up of 2-5 years.

CONCLUSIONS
1. Angiofibroma is a challenging problem
2. Early diagnosis holds the key to success
3. Lateral Rhinotomy is the best approach for most of the tumours in Pakistan

REFERENCES:


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