MANAGING PAROTID HAEMANGIOMA IN A RURAL SET UP: A CASE REPORT

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MANAGING PAROTID HAEMANGIOMA IN A RURAL SET UP: A REPORT. (Abstract):
Salivary tumours are rare in children. (<5%), but when present 50% of them are parotid haemangioma compared to 2% in adults. The diagnosis is clinical supplemented by imaging. Management is controversial with varied recommendations ranging from wait and watch to intralesional or systemic steroid with or without bleomycin / interferon / interleukin. Surgery is recommended if complication arises though in some centers it is offered early. Definitive surgical intervention is preferred in atypical haemangiomas which fail to regress within first 6 yrs and in high flow lesions. These lesions are usually managed in tertiary set up with head and neck or vascular surgery unit. We present our experience with managing a parotid haemangioma in a 10 year old in a rural set up successfully treated with definitive surgical intervention. With only ultrasonography and fine needle aspiration cytology (FNAC) as guide and unavailability of vascular surgeons and late presentation of cases with complication compounding the management, the treatment becomes challenging. We include a review of literature.

KEY WORDS: SALIVARY TUMOURS, PAROTID HAEMANGIOMA, SURGICAL MANAGEMENT

INTRODUCTION

Salivary tumours are rare in children. (<5%) [1], but when present 50% of them are parotid haemangioma compared to 2% in adults [2,3]. Differentiation with vascular malformation is important in the early stage as the natural history of haemangioma is to undergo initially a proliferative phase followed by involution [4], but arterio-venous malformation (AVM) continues to grow with the child. These lesions should be treated in a head and neck or vascular surgery unit with facilities for MRI and interventional radiology but in this part of country vast majority of patients are poor and cannot avail it. They present usually with complication and often lost in follow up.

We report a case of 10 year old boy with parotid haemangioma managed successfully in a district hospital with the limited diagnostic and therapeutic facilities.

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CASE REPORT

A 10 year old boy presented with swelling over left parotid for 7 years, but slowly enlarging with occasional flair. On examination, irregular, non pulsatile, soft, compressible swelling overlying left parotid region superficial to masseters, 4cm x 3cm in size with ill-defined margins was noted. The skin over the swelling had faint bluish discoloration. There was facial asymmetry (Fig. 1).

Ultrasonography suggested a multiloculated cystic space occupying lesion involving left parotid gland with evidence of recent hemorrhage. FNA suggested a benign parotid cyst with recent hemorrhage.

![Fig. 1 Pre-operative front and side profile](image1)

Decision to operate was taken on the basis of the long history, failure to undergo complete resolution and the evidence of recent (and perhaps earlier) episodes of intratumoral hemorrhage. Parotid haemangiomia and cystic parotid lesions were in the differential diagnosis. On exploration a haemangiomatous malformation confined to the superficial lobe was found. Superficial parotidectomy with en bloc removal of the tumor was done after careful preservation of facial nerve. Post operative period was uneventful (Fig. 2). Biopsy confirmed it was parotid haemangioma.

![Fig. 2 Post-operative front and side profile](image2)
DISCUSSIONS

Typical capillary haemangioma has a proliferative phase followed by involution, but few atypical and other vascular malformations like arterio-venous malformations do not regress and need early intervention. Conservative treatment is recommended, as resolution usually occurs within first 6 years of life [5]. Surgery is reserved for complications. Average age of surgery is 4.8 yrs. [1,6]. There are reports of successful sclerotherapy with Pingyangmycin or Bleomycin A5 plus dexamethasone or only steroid, but they are all in infant age group (average age of 10 months) [7-9]. Early surgical intervention required for complications has good results especially in craniofacial region [10]. However all form of conservative therapy needs repeated treatment and prolonged follow up of 3 to 4 years.

Usually growth of haemangioma occurs in the first year, but prolonged growth is observed in lesions with a deep component and segmental morphologic characteristics. Recognition of this subset is important.

Large series [9] dealing with up to 9 cm large parotid haemangioma treated with triamcinolone report excellent response up-to 70% in infants (<1 year), but failure to thrive is a potential complication [11]. Interventional radiologic percutaneous sclerotherapy for low-flow lesions (particularly those causing complication) and embolo-sclerotherapy for high-flow lesions with or without adjunctive surgical intervention have become the mainstay of therapy.

Outcome after excision of localised cervicofacial haemangiomas and low-flow vascular malformations is also excellent [12]. For arteriovenous malformations combined embolisation-resection is definitive treatment. Flap reconstruction may prevent their recurrence especially in Schobinger stage II to III (Table 1) and aesthetically better if large area needs excision [13,14].

Table 1

<table>
<thead>
<tr>
<th>Stage</th>
<th>Schobinger classification of AV malformation [14]</th>
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</thead>
<tbody>
<tr>
<td>I</td>
<td>Cutaneous blush/warmth</td>
</tr>
<tr>
<td>II</td>
<td>Bruit, audible pulsations, expanding lesion</td>
</tr>
<tr>
<td>III</td>
<td>Pain, ulceration, bleeding, infection</td>
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<tr>
<td>IV</td>
<td>Cardiac Failure</td>
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</tbody>
</table>

Nonhepatic hemangiomas including parotid have an apparent propensity to develop a high flow element and behave as transiently "arterialized" hemangiomas difficult to regress spontaneously [15].

Ultrasonography is initial imaging study used for the examination of salivary gland lesions in children, and permits the differentiation of intraglandular and extravascular lesions, and may suggest the correct diagnosis. In cavernous haemangioma prior to surgery, magnetic resonance angiography, intra-arterial digital subtraction angiography and technetium 99m-labeled red blood cell pool imaging are helpful to differentiate high and low flow lesions. In the case of high flow extended lesion requiring surgery, the facial nerve may be difficult to identify and should be monitored intraoperatively [16-18].

Parotid haemangioma, especially those with a deep component and segmental morphologic characteristics is relatively more resistant to therapy with corticosteroids or interferon alfa-2a [19]. Differences in drug metabolism, vessels caliber, and/or blood
flow may account for this [20]. Different types of laser therapy are also recommended for immature haemangiomas, but not for mature one [21].

CONCLUSIONS
In our case, only ultrasonography and FNAC was available in what appeared to be a parotid mass, but definitive diagnosis awaited surgery. With the longstanding history and frequent flare-ups and poor chance of follow up, surgical intervention is more suitable in our setting if phase of involution fails in such cases.

REFERENCES
