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Case Report

Masson's tumor of the neck: A rare case report

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Abstract

Masson's tumor is a rare, benign, vascular lesion, commonly affecting the head, neck and peripheries. It is usually asymptomatic and can be confused with malignant tumors. We report a 56 year old male who presented with a solitary swelling in the right side of neck which was clinically diagnosed as a benign cystic lesion, hence complete excision of the lesion was done. Histopathology demonstrated the papillary proliferation of endothelial cells, in favour of Masson's tumor.

Keywords: masson's tumor; endothelial cells; trauma; haemangioma

Introduction

Masson's tumor also known as intravascular papillary endothelial hyperplasia [1] was is a rare benign tumor constitutes 2% of all soft tissue tumors [2]. It is an benign, vascular lesion characterised by papillary fronds lined by proliferating endothelium. Clinically it mimicks other vascular lesions such as pyogenic granuloma, haemangioma and angiosarcoma and hence diagnosis by clinical examination alone is difficult. Pathogenesis is thought to be as a response to blood vessel injury or vessel wall thrombosis [3,4]. Prognosis is excellent if complete excision is done, but may recur if incompletely excised.

Case Report

A 56 year old man presented with a swelling on the right side of neck of 6 months duration. Clinically asymptomatic with no significant medical past history. It was 3 X 4 cm in size, firm, non-tender and not fixed to any underlying structure. Clinical diagnosis of benign cystic lesion was done. In-view of its location, adjacent to major vascular structure a MRI scan was done. It was reported as a well-defined hyper intense lesion with hypo intense rim showing diffusion restriction, which was restricted to the subcutaneous plane [Fig. 1 & 2].

With the working diagnosis of benign lesion, complete excision of the lesion was done under local anaesthesia, with no local complications. On gross examination, well capsulated cystic lesion with internal septations containing dark brown fluid. Microscopic examination showed thick wall with fibro-collagenous tissue, anastomosing vascular channels, plump endothelial cells with central thrombi [Fig. 3 & 4]. No evidence of mitosis or necrosis was noted. Post-operative surgical outcome was uneventful.

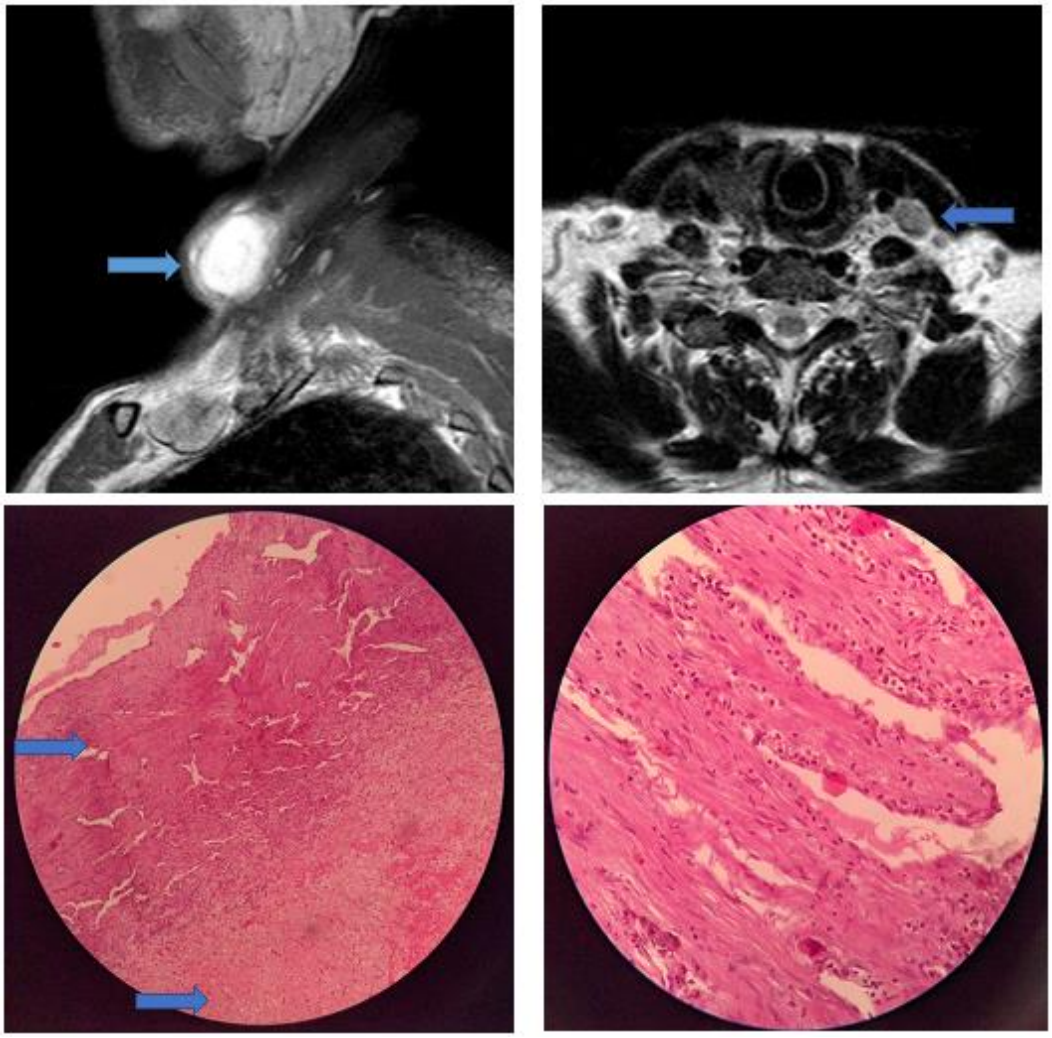

Figure 1 & 2: *MRI showing a well-defined hyper intense lesion with hypo intense rim showing diffusion restriction, which was restricted to the subcutaneous plane.*

Figure 3 & 4: *(4X, H&E stain) & 4(40X, H&E stain): Microscopic section showing a vessel wall with papillary proliferation of endothelial cells and thrombus formation*

Discussion

Intravascular papillary endothelium hyperplasia was first described by Pierre Masson and called it as "Hemangioendotheliomegetant" [5]. Later Clerkin and Enzinger coined the term IPEH in 1976[1]. Masson's tumor accounts for 2-4 % of benign and malignant vascular tumor of the skin and soft tissue. It involves mainly the lower extremitis(77%), skin and subcutis of the head and neck(23%), and fingers(16%) [6].

Clinically, IPEH appears as small, firm, superficial nodules, with red to blue discolouration of the overlying skin or mucous membrane and are asymptomatic. The exact pathogenesis of IPEH is unclear, but trauma has been postulated as one of the predisposing factor. The release of Beta-fibroblast growth factor from macrophages attracted to the site may trigger endothelial cell proliferation inturn induces the release of more fibroblast growth factors, leading to a vicious cycle [7]. Because the clinical signs and symptoms are non-specific and variable, preoperative diagnosis is challenging. The patients history of trauma, clinical examination and imaging, MRI scan can help differentiating IPEH from other malignant lesions.

Histologically the following findings are confirmative of Masson's tumor:

1. Endothelial proliferation within the vessel
2. Multiple papillary projections
3. Fibrin thrombus within
4. No evidence of necrosis

The papillary projections result from endothelialisation of fragmented thrombotic material and the ingrowth of anastomosing capillaries. IPEH must be distinguished mainly from angiosarcoma which is clinically identical [8].

The treatment is complete surgical excision, prognosis is excellent unless excised completely, or recurrence can occur. It is a locally growing tumor with no metastatic lesions reported[9].

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