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Case Report

Intramuscular hemangioma in masseter muscle: a rare presentation

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ABSTRACT

Intramuscular hemangioma contribute to less than 1% of all hemangioma forming around 0.8%. It is commonly located in trunk and extremities. Only 10 to 20% can be found in the head and neck region arising from masseter and trapezius. We present a rare case of a young male with intramuscular hemangioma of masseter muscle. A 20 year old male patient presented to the OPD with complaints of swelling over right side of face over parotid region for the past 6 years. On clinical examination, there was a oblong swelling of about 3×2 cm around the right parotid region. In MRI neck the features were suggestive of intramuscular hemangioma in the right masseter muscle. The patient was planned for an excisional biopsy. Histopathological examination confirmed the diagnosis of intramuscular hemangioma. Although intramuscular hemangioma of masseter is a very rare possibility, still it should be kept in consideration in the list of differential diagnoses of the tumours around parotid region. As this diagnosis will make a difference in the work up plan and management of the patient.

Keywords: Intra muscular hemangioma, Masseter muscle, Magnetic resonance imaging

INTRODUCTION

Hemangioma is a benign tumour of vascular origin, and is characterised by abnormal proliferation of blood vesssels. Hemangiomas form around 7% of all benign tumours.[1] Intramuscular hemangioma contribute to less than 1% of all hemangioma forming around 0.8%. It is commonly located in trunk and extremities.[2] Only 10-20% can be found in the head and neck region arising from masseter and trapezius.[3]

Due to its location, most commonly misdiagnosed as parotid tumour on clinical examination. The intramuscular site of hemangioma leads to the absence of typical features of hemangioma like thrill, bruit and external colour change.

CASE REPORT

A 20 year old male patient presented to the OPD with complaints of swelling over right side of face over parotid region for the past 6 years. Initially the swelling was small in size which later increased and became more prominent. Over the last 6 months there was intermittent pricking pain. There was no significant medical history. On clinical examination, there was a oblong swelling of about 3×2 cm around the right parotid region. The swelling was non tender freely mobile and the skin above the swelling was pinchable. Examination of oral cavity and oropharynx was normal. Differential diagnoses like parotid tumour, parotid lymphadenitis and lipoma were considered.

Magnetic resonance imaging (MRI) neck showed well define lobulated T2/STIR hyperintense, T1 mixed intense soft tissue leision measuring 32×22×14 mm with no diffuse restriction seen within right masseter muscle with no perileisional oedema. Features were suggestive of intramuscular hemangioma in the right masseter muscle.

The patient was planned for an excisional biopsy. Cheek incision placed and mass was approached with careful

dissection and ligation of feeding vessel was done. Mass was excised in toto and facial nerve was preserved. Postoperatively there were no complications like facial nerve injury and parotid duct injury.

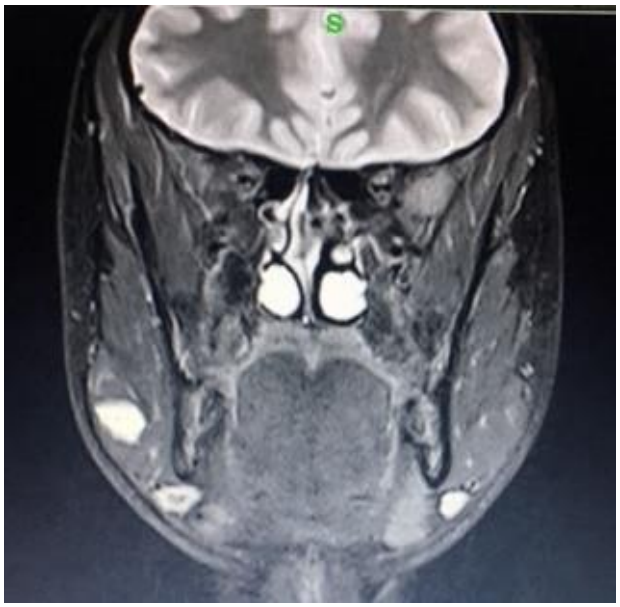

Figure 1: MRI T2 weighted image with hyperintensity showing intramuscular hemangioma.

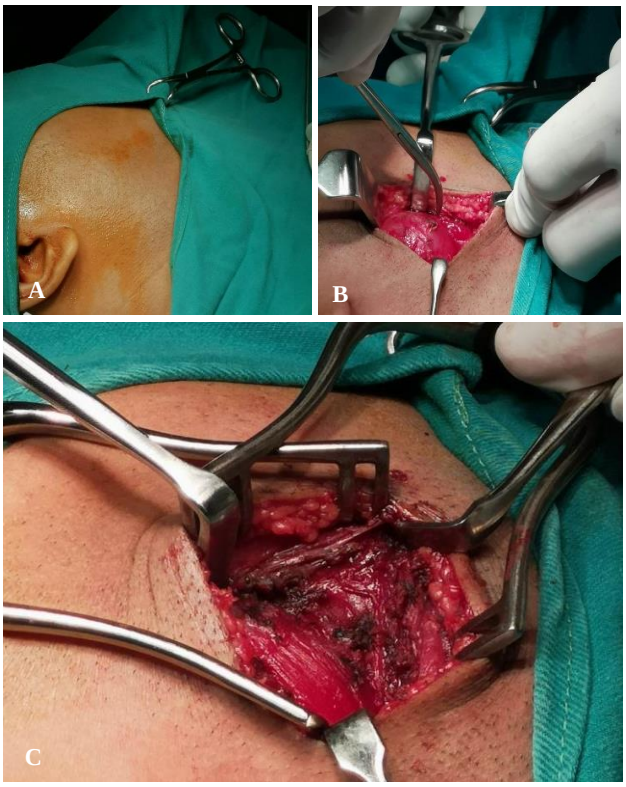

Figure 2 (A-C): Intraoperative pictures.

Histopathology showed fibroadipose tissue and skeletal muscle fibres splayed by a leision composed of varingly sized dilated thin walled vascular channels lined by single layer of flattened endothelium containing numerous RBC's mixed with fibrinous material with no evidence of malignancy; confirming with preoperative diagnosis of intramuscular hemangioma right masseter. There was no recurrence even after a 6 month follow up.

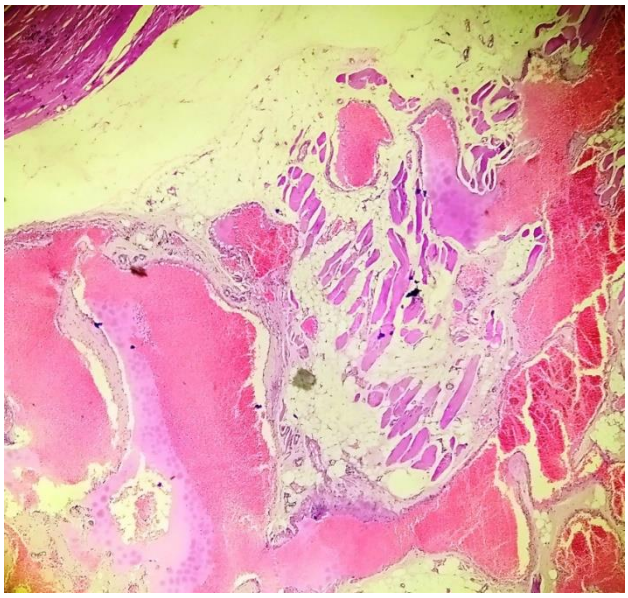

Figure 3: Histopathology showing intramuscular hemangioma.

DISCUSSION

Hemangiomas are tumours of blood vessels occurring most commonly during infancy, over cutaneous and mucosal surfaces.[4] International society for study of vascular anomalies modified the classification of vascular malformation versus vascular tumours.[5]

Vascular malformations are from birth and are categorised as slow flow vascular malformation (capillary, venous and lymphatic) and fast flow (arteriovenous malformation) and complex-combined vascular malformations. Vascular tumours are associated with cellular hyperplasia and include hemangiomas and hemangioendotheliomas.

Intramuscular hemangioma is commonly diagnosed by the age of 30 years with a male predominance.[2,3,6] Causative factors have been trauma and hormonal factors.[7] The intramuscular nature of hemangioma and the rarity of diagnosis makes it extremely difficult to indentify before the surgery. Only 8% of cases are diagnosed accurately before surgery.[8]

MRI forms the gold standard for diagnosis of intramuscular hemangioma.[9] T1 weighted images are isointense and T2 weighted images show hyperintensity due to increased fluid content in view of large blood vessels.[7] FNAC is usually contraindicated due to the risk of bleeding and extravasation of blood.[10]

Various treatment options include cryotherapy, sclerosant injection, embolization, arterial ligation and electrocoagulation. Nonsurgical treatments are opted only when surgery is contraindicated.[11] Best management modality is surgical resection with wide margins due to its infiltrative nature.[12] Recurrence rate has been ranging from 9 to 28%.[13]

CONCLUSION

In conclusion, although intramuscular hemangioma of masseter is a very rare possibility, still it should be kept in consideration in the list of differential diagnoses of the tumours around parotid region. As this diagnosis will make a difference in the work up plan and management of the patient.

MRI neck is one of the best investigations of choice to diagnose intramuscular hemangioma. We highlight the need for a careful clinical evaluation supported by radiologic and histopathological investigations which will help in identifying the disease at an early stage when the mass is small in size, resulting in better prognosis. This results in giving significant patient satisfaction.

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