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Case Report

Rare case of intramuscular hemangioma of infraspinatous muscle

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ABSTRACT

Intramuscular hemangiomas are rare benign neoplasms accounting for <1% of all hemangiomas. Intramuscular hemangiomas are relatively uncommon and frequently misdiagnosed, due to their vague presentations. In any patient with soft-tissue mass suspected of a hemangioma, MR imaging may provide very specific information regarding the characteristics, the origin, and the extent of the lesion than other imaging modalities. The definitive diagnosis is made by histopathological study of the surgical specimen. Here, we present a case report of intramuscular hemangioma occurring in the left infraspinatous muscle in an 18-year-old boy. Due to rare nature of such lesions, the patient's diagnosis was delayed and patient was treated for chronic pain in left shoulder joint. Magnetic resonance imaging finally clinched the diagnosis and patient was successfully operated upon and subsequently cured.

Keywords: Intramuscular tumor, Soft tissue mass, Hemangioma, Infraspinatous muscle

INTRODUCTION

Intramuscular hemangiomas are soft tissue tumors of vascular origin and mostly found in extremities & trunk. The incidence of intramuscular hemangioma is less than 1% of all hemangiomas. Due to its vague clinical presentation, it is very difficult to reach the diagnosis just by clinical examination and sometimes, radiological image findings are also insufficient for definitive diagnosis. Hence primary surgical excision biopsy is the only definitive diagnostic method to rule out malignancy & definitive treatment. Here we are presenting an interesting rare case of intramuscular hemangioma of infraspinatous muscle.

CASE REPORT

An 18 year old male patient was admitted with the complaints of pain in the left shoulder, arm and left side of upper back on movement of the left upper limb since 4 years. The patient also noticed swelling over the left upper back since 1 year. Initially patient was treated with analgesics for his painful shoulder movement. The patient used to get severe pain in the left shoulder & over the scapular region on lateral rotation of arm. Due to this severe pain, patient was unable to carry out his basic daily activities such as bathing, personal hygiene and dressing.

On examination of the upper back, a single, well demarcated, immobile, nontender lump of 10 cm × 8 cm in size, was identified in the left infraspinatous region (Figure 1). The mass was soft in consistency & the skin above the swelling was normal. There was no palpable thrill/ pulsation anywhere over the mass. The mass would become less prominent on adduction with medial rotation of the left arm and would become more prominent on lateral rotation of the arm with aggravation of pain in left shoulder joint. Clinically the diagnosis was made as soft tissue tumor over the infrascapular area involving the infraspinatous muscle. The contrast MRI scan (Figure 2) showed abnormal vascular channels involving entire left

infraspinatous muscle suggestive of hemangioma. The patient was operated to excise entire left infraspinatus muscle with intermingled hemangioma within it (Figure 3). The involved muscle was excised completely from its origin from the infraspinatous fossa to the insertion over the greater tubercle of the humerus. The histopathological examination of the specimen showed large cavernous hemangioma involving the entire bulk of the Infraspinatous muscle. The patient recovered well with complete relief from pain in the left shoulder joint & arm movement in any axis. The histopathology report revealed hemangioma involving the entire infraspinatous muscle without any evidence of malignancy.

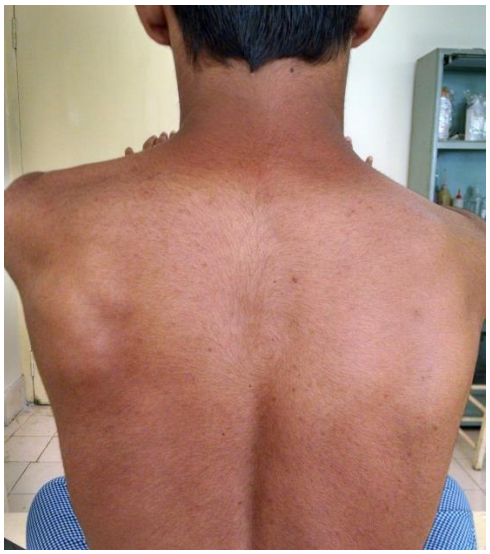

Figure 1: Well demarcated mass seen in the left infrascapular region.

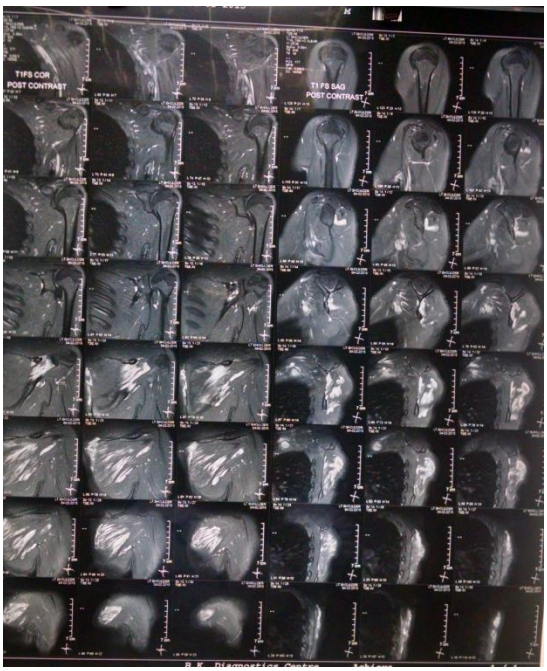

Figure 2: Contrast MRI scan showing mass in the left infraspinatous muscle.

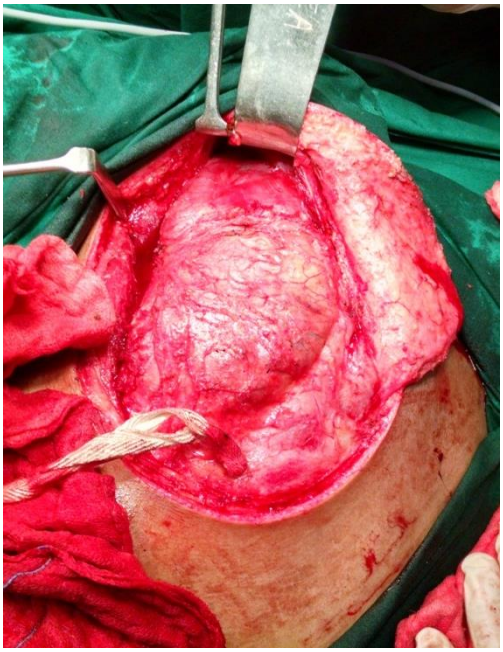

Figure 3: Intra operative findings with complete dissection of left infraspinatous muscle.

DISCUSSION

The intramuscular hemangiomas are rare tumors & they make up less than 1% of all the hemangiomas.[1] Infraspinatous muscle is an uncommon location for intramuscular hemangioma and has not been reported in the literature so far. Most of the time, clinically on bedside examination the intramuscular hemangiomas are misdiagnosed.[2] Chandrasekar et al. in their article found that intramuscular hemangiomas are unique vascular tumors occurring most commonly in the trunk and the extremities. They present diagnostic challenge due to their deep position and unusual presentation.[5] The case mentioned in our article was treated before surgery as pain in the shoulder joint due to arthritis/due to trauma in a young boy due to sports activity. The swelling was initially misdiagnosed as a lipoma over the infrasipnatous region of scapula.

The case reported in this article was diagnosed as a soft tissue tumor involving the left infraspinatous muscle based on the patients' history & clinical examination and the diagnosis was confirmed by the preoperative contrast MRI scan & the postoperative histopathological investigation. The hemangiomas are described based on the type of vessel involved i.e. capillary, cavernous & mixed. Intramuscular hemangiomas are characterized as isointense mass lesions with increased signal intensity due to fat on T1 weighted images & well marginated markedly hyerintense mass lesions containing tubular structures with blood flow characteristics on T2 weighted images in MRI. Over 90% of intramuscular hemangiomas are misdiagnosed radiologically since hemangiomas are rarely seen in skeletal muscles and sometime contain an excessive amount of fat & fibrous tissue[6]. However, Lee

et al. in their article concluded that in any patient with soft-tissue mass suspected of a hemangioma, MR imaging may provide very specific information regarding the characteristics, the origin, and the extent of the lesion than other imaging modalities.[3]

In a study comparing different treatment modalities, Uslu et al. concluded that ultrasound guided percutaneous sclerotherapy is preferred for pedal hemangiomas. For trunkal hemangiomas, surgical excision is recommended.[7] In our case, we performed primary surgical excision and the patient did not require any other treatment modalities such as sclerotherapy or embolisation. The definitive diagnosis is made by histopathological study of the surgical specimen.[4]

CONCLUSION

The intramuscular hemangiomas pose a diagnostic clinical challenge because of their infrequent incidence, deep seated location and unfamiliar presentation. Patients may present with vague pain which may be misguiding in the initial stage of reaching to the correct diagnosis. Detailed clinical examination with supporting imaging investigation such as contrast MRI should be performed for accurate diagnosis. Various treatment options are available but primary surgical excision remains the preferred treatment option for deep intramuscular hemangiomas on the trunk with significant symptoms.

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