Case Report

# Intramuscular hemangiomain neck: A case report

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**Abstract**

Hemangiomas of skeletal muscle represent 0.8% of all benign vascular neoplasm1. Of these 13.8% occur in the head and neck region2, with the masseter muscle being the most common site, followed by the trapezius and sternocleidomastoid muscles respectively2,3. Intramuscular Hemangiomas [IMH] generally occur in the first three decades of life4.

**Key words:** Intramuscular hemangioma, USG, CECT, CT angiography.

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## INTRODUCTION

A 24 year old girl presented with a swelling in the right supraclavicular region of 11 months duration. Swelling gradually increased in size, becoming more pronounced. Over the last one month she developed pain over the swelling. She gave no history of trauma or oral contraceptive pill usage. On physical examination there was a swelling in the right supraclavicular region 3 x 2 cm which was non-tender. On rotating the neck to the opposite side the swelling became comparatively taught than normal. Imaging include X ray and USG, followed by CECT scan and CT angiography. On plain X ray film (PA view) chest showed multiple small rounded calcified opacities with central lucency in right supraclavicular region extending into the soft tissue planes on right side itself.(Figure 1) An ultrasound scan of the abdomen and pelvis was done on GE Voluson S6 using 3.5-5MHzfrequency transducer, it reveled a multiseptated irregular cystic lesion measuring 26 x 15 mm in the right supraclavicular region,(Figure 2) the cystic lesion was anechoic with multiple septas within with no evidence of internal echoes. The lesion extending into the right lateral neck region, it appeared to be in communication with the Sternocleidomastoid muscle though it was unclear on USG. On Doppler study, the lesion did not show any vascularity. (figure 3)The right common carotid artery appeared to be normal. (figure 4) and other major vascular structures appeared to be normal.

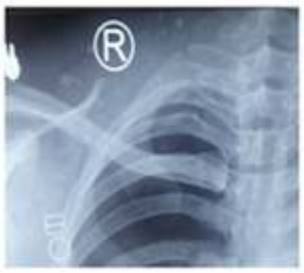


Figure 1

Figure 2

Figure 3

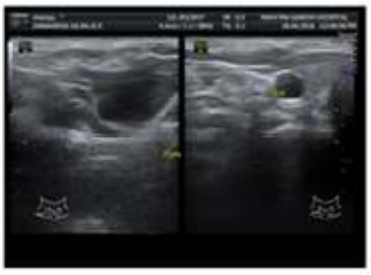

Figure 4

**Figure 1:**

**Figure 2:** A multiseptated cystic lesion anechoic lesion in right supraclavicular region

**Figure 3:** No evidence of colour flow uptake, the lesion extending into right lateral neck region

**Figure 4:** Right common carotid artery appears normal, while the lesion is far lateral from right common carotid artery

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CECT was done, it reveled a soft tissue density lobulated poorly defined lesion with multiple calcific foci in right side of neck, extending inferiorly to involve upper part of posterior chest, superiorly to involve the posterior wall of the pharynx and posterior triangle of neck with mild compression and displacement of adjacent muscles and internal jugular vein. (figure5). It also showed involvement of right paraspinal muscles, the lesion also show focal areas of pooling of contrast with in the lesion on post contrast study. (figure 6 and 7). CT angiography was done which releaved an aberrant branch arising from right subclavian artery lateral to the origin of vertebral artery (figure), which appears to be the feeder artery, the aberrant artery further giving multiple branches to the mass (figure 8 and 9) FNAC revealed greenish color aspirate, cytology of which did not reveal any cellular material, this probably was extravasated blood and the greenish tinge, due to breakdown products of hemoglobin. This was evident as areas of hemorrhage on histology.

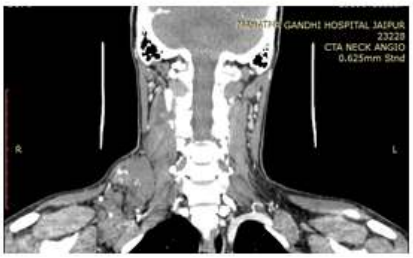


Figure 5

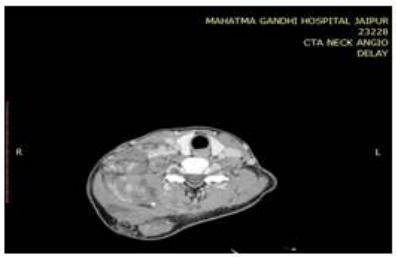


Figure 6

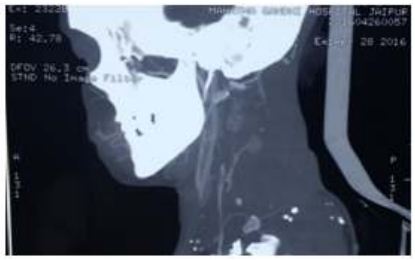

Figure 7

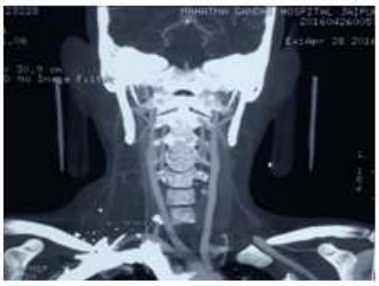

Figure 8

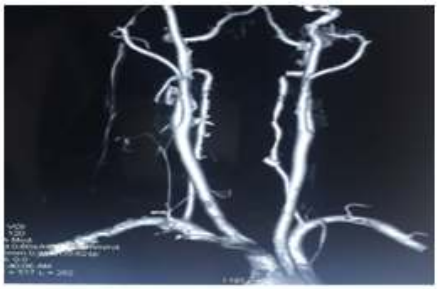

Figure 9

**Figure 5 Figure 6:** Axial CECT image showing patchy heterogenous enhancement of the mass lesion on right side, its also showing involvement of the right paraspinal muscles.

**Figure 7:** Sagittal CECT image showing pooling of the contrast in seen in multiple dilated sinusoidal channels.

**Figure 8:** CT angiography showing an aberrant vessel arising from right subclavian artery, lateral to the origin of the right vertebral artery, multiple rounded phleboliths also noted.

**Figure 9:**

## DISCUSSION

Hemangiomas are the most frequent benign vascular neoplasm, being four times more frequent in females. Usually they appear as a single mass, but in a small percentage, they can be multiple. Hemangiomas develop in the head and neck, followed by the trunk and extremities[5,6]. The most common localization of intramuscular hemangiomas is the lower extremities, followed by the upper extremities. These soft tumors are often placed subcutaneously, and intramuscular extension is rare[7]. Cavernous hemangiomas are larger in size and deeper, with a high tendency in thrombosis and calcification[8]. The case we presented enclosed the previously described characteristics, the lesion being discovered in a young female and localized in the upper limb, but unlike the other studies, the tumor extended to the brachial muscle fibers. Sinusoidal hemangioma is a rare variant of cavernous hemangiomas[8]. Imaging diagnosis of these lesions is usually made by MRI and angiography. X-ray can reveal a nonspecific mass with calcification and bone changes if the tumor is located adjacent to the osseous structures[9]. The CT may identify a soft tissue mass with densities similar to muscles and also the phleboliths, even the small ones. The tumors enhance after contrast media administration, with depiction of serpentine vascular areas[10]. The imaging evaluation of choice is MRI, this imaging technique being important in the assessment of these tumors. MRI is able to determine the extent in the surrounding tissue and accurately differentiate between vascular lesions with low-flow and high-flow[11,12] Haemangiomas are readily distinguished from other soft-tissue tumours by computerized tomography (CT), MRI, and arteriography. CT is useful for defining the form, size and anatomic relationship of

the tumour but MRI is the method of choice in defining the vascular nature of the tumour. On T1 weighted imaging, haemangiomas are iso-intense or hypo-intense to muscle. With T2 imaging, the lesions are hyper-intense on account of the volume of stagnant blood, clearly differentiated from the normal muscle and fibro-fatty septa[13] Intra-muscular haemangiomas usually present as a slow-growing mass with distinct margins, mobile and do not exhibit any of the vascular signs such, discoloration of overlying skin or pulsation. The differential diagnosis includes: neurofibroma, lipoma, dermoid cyst, enlarged lymph nodes, soft-tissue sarcoma, myositis ossificans and temporal arteritis[14,15]. Arteriography is helpful in delineating major vascular feeders for pre-operative embolization.

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