INTRAMUSCULAR CAVERNOUS HAEMANGIOMA OF THE ADDUCTOR BREVIS - A CASE REPORT

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ABSTRACT

Hemangiomas are common soft tissue tumors comprising 7% of all benign tumors. The most common presentation is cutaneous and present in childhood and females are more commonly affected. Deep-seated hemangiomas are usually intramuscular, although intra-articular synovial hemangiomas also occur. The commonest anatomic site is the lower limb. Many treatment modalities for the symptomatic haemangioma are available but surgical excision is the preferred treatment. We present an unusual case of a cavernous intramuscular haemangioma involving the adductor muscles.

KEYWORDS

Cavernous haemangioma, Intramuscular, adductor compartment, excision

INTRODUCTION

Hemangiomas are the most common benign soft tissue tumor comprising 7% of all soft tissue tumours.¹ They commonly occur in skin, mucosal and subcutaneous surface. Sometimes they present in deep tissues, occasionally intramuscular and rarely within bone. We report a rare case of a cavernous hemangioma at adductor brevis muscle in a male child.

CASE REPORT

A 13 year male child presented with complains of pain in the left groin for past 1 year & limp for six month. There was no past history of trauma, fever, or associated constitutional symptoms. He visited various orthopedic centers in due course & got treated in form of medicine, traction & rest but in vain.

On examination diffuse generalized atrophy of left thigh muscles are visible. Left lower Limb was in flexion, adduction & internal rotation. ASIS was higher level in left side with exaggerated lordosis. There was an apparent shortening of 1.5cm, 15 degree Fixed flexion deformity & 5 degree Adduction deformity of hip .The range of motion of his hip joint was painful and terminally restricted.

Blood parameters including CBC, ESR, CRP, BT, CT and INR were within normal limits. Viral markers and test for Tuberculosis were also negative.

X ray showed Pelvic obliquity, increase in neck shaft angle and adducted hip though the joint appeared normal (fig 1).

MRI showed well defined hyper intense lesion with hypo intense rim on T2W images seen in adductor brevis muscle, isointense homogenous enhancement in post gadolinium T1WFS images noted in the medial aspect of thigh in the adductor brevis muscle measuring 5.1X2.8cms. On T1W images the leison appeared hyper intense with hypo intense rim (fig 2a, b, c).

Using ludloff’s medial approach, excisions of mass were done intoto and send for biopsy (fig 3a). The mass we incised the mass and appeared like a blood filled cavity (fig 3b). Histopathological study confirmed it to be Cavernous hemangioma (fig 4). The patient was doing well at last follow up at 1 year.
DISCUSSION

Hemangiomas are benign vascular neoplasm or hamartomas indigenous to the site of origin though often the term is misused for any type of vascular abnormality in both medical and surgical fields. Intramuscular presentation accounts for 0.8-1% of all hemangiomas and unlike the cutaneous variant presents in second to third decade of life with almost equal sex distribution. The usual site for intramuscular hemangioma is lower limbs with accounting for 45% of it and quadriceps being the most common muscle affected. Besides these there are many reports of presentation in head and neck region. They occur singly but can be multiple when occurring with consumptive coagulopathy of Kasabach-Merritt syndrome or as part of Maffucci syndrome.

Intermittent pain and sometimes swelling if the muscle is superficial is the common symptom which is exaggerated with exercise or contraction of the affected muscle. Their natural history is to enlarge slowly but may be accelerated with a growth spurt or trauma. Rarely do these spontaneously regress. Malignant transformation is rare. The theories of origin remain controversial between congenital and trauma. There is also a speculation of a possible hormonal role as there have been reports of sudden increase in size on taking OC pills.

Ultrasound is effective in diagnosing the intramuscular mass though sometimes the extent cannot be visualized. Color Doppler adds no benefit as the flow is usually too slow. Magnetic resonance imaging is now the gold standard and has superseded other investigations, as it can delineate the extent of the lesion, and can differentiate haemangioma from an invasive malignant process.

On T1-weighted images, a hemangioma appears as low signal intensity mass. On T2-weighted images, it shows areas of high signal intensity with linear and lacelike area of low or intermediate signal intensity. Lobulations, septations and central low signal intensity dots are characteristic. Fine-needle aspiration cytology in most reported series is frequently non-diagnostic and yields only boldly aspirate. Histologically these are blood filled spaces lined by endothelium. Allen and Enzinger have classified them according to the size of the vessels predominantly into capillary type (small-vessels - less than 140μ diameter), cavernous type (large-vessel - more than 140μ diameter) and mixed type (both small and large vessels).

Complications may include a pressure effect due to mass, cardiac failure from arteriovenous shunting, and sometimes consumptive coagulopathy (Kasabach-Merritt syndrome).

Many treatment modalities like steroid administration, cryotherapy, radiation therapy, and embolization are tried but the treatment of choice remains surgical excision wherever possible. Sclerosing agents are useful in bigger lesions not amenable to surgery. Local recurrence ranges from 9 to 28%. Regional and distant metastasis has not been reported.

CONCLUSION

Intra muscular hemangioma is a rare diagnosis which requires a high index of suspicion whenever a mass of soft tissue density is encountered in the region of skeletal muscle in a young adult. Though Sonography is useful in diagnostic work-up, MRI and sometimes angiography may be needed to delineate the extent of disease. The treatment of choice remains surgical resection wherever feasible.
Fig. 1: Plain Xray showing pelvic obliquity and adduction deformity

Fig. 2a: T1 axial cuts showing low signal mass in left medial compartment

Fig. 2b: T1 coronal cuts showing low intense lesion

Fig. 2c: T2 Coronal cuts showing high intense lesion with lobulation

Fig. 3a: Excised mass in toto

Fig. 3b: The mass was cut and showed blood filled cavity
Fig. 5: Histopathological picture of mass which shows vascular spaces containing red blood cells lined by endothelium

REFERENCES

