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A RARE CASE OF VASCULAR MALFORMATION WITHIN A LIPOMA OVER ANKLE

General Surgery

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ABSTRACT

Angiolipoma is a rare histological variant of lipoma, most commonly encountered in trunk and upper extremities of young adults. Histologically it comprises of mature adipose tissue and proliferative blood vessels. Here we present a variant of this lesion with additional components located on an unusual site for angio-lipoma. A 12-year-old female who presented with a swelling in the left ankle for three years, associated with aching pain on exertion of pressure over it, aggravated on walking long distance and relieved on taking rest, no complaints of other swellings in the body. Computed tomography volume scan of left ankle along with screening ultrasound were suggestive of vascular malformation within fat dense tissue. The patient underwent excision biopsy, the swelling was excised in toto. Histopathology reports confirmed findings consistent with Arteriovenous malformation within a lipoma, a rare presentation concerning histopathology and location of the lesion. When there is an ill-defined foot mass with fat component with variable enhancements on MRI/CT, angiolipoma should be considered as a differential diagnosis & These lesions are treated with complete surgical excision.

KEYWORDS

angiolipoma , lipoma, vascular malformation in lipoma .

BACKGROUND:

Angiolipoma is a rare histological variant of lipoma. Angiolipoma are the most commonly encountered in the trunk and upper extremities of young adults. Histological it comprises of mature adipose tissue and proliferative blood vessels. Here we present a case where a lesion of this variant was encountered on the ankle and had additional components that were noted on imaging and histopathology, ultimately suggesting a vascular malformation within a lipoma .

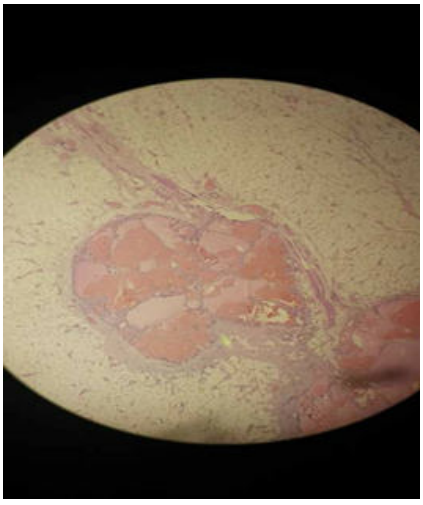
CASE REPORT :

A 12-year-old female came with complaints of swelling in the left ankle for three years. Static in size. The swelling was associated with aching pain on exertion of pressure over it, aggravated on walking for a long distance, and relieved on taking rest. No complaints of other lumps in the body. On physical examination, a swelling of size 3x3 cm, spherical shaped noted between the lateral malleolus and Achilles tendon. Smooth surface with a defined edge and slip sign: negative . Soft in consistency and fluctuation test: negative. Non-pulsatile. The overlying skin was pinch-able , and the swelling was not movable, when the left foot was hyper-flexed. CT Volume scan of the left ankle joint was done. MPR & SSD / VR images were obtained, reports suggestive of A fat density mass measuring 5.7x1.8x1.8 cm, with a hypodense mass measuring 2.1x 1.3 x 0.9 cm within, is noted in the subcutaneous plane in the posterolateral aspect of the distal third of the leg. Ultrasound screening in the region showed arteries and veins within a fat density mass. These findings were suggestive of a vascular malformationwithin fat density tissue.

The patient underwent an excision biopsy. The specimen was excised in toto and sent for histopathological examination(HPE). HPE showed fibrofatty tissue composed of lobules of benign mature adipocytes with interspersed fine capillaries, with multifocal aggregates of variable-sized thin and thick-walled blood vessels, forming vague lobules seen on myxoid fibrocollagenous stroma amidst the adipose tissue. These findings were consistent with arteriovenous malformation within a lipoma perioperative period was uneventful, and the patient was discharged post-recovery.

No recurrence noted on subsequent follow up.

CLINICAL IMAGE



HISTOPATHOLOGICAL FINDINGS CONSISTENT WITH ANGIO LIPOMA

DISCUSSION:

Lipomas are most common benign mesenchymal tumors of the musculoskeletal system. However, angiolipomas are rare histological variants of lipomas. They comprise of 5-17% of lipomas(1),(2),(3). Angiolipoma was first described by Bowen in 1912 but was established as an entity by Howard and Helwig in 1960(1),(4). Later in 1966, onzalez-Crussi et al. Distinguished between infiltrating and non-infiltrating types(4). The non-infiltrating type is more common and presents as multiple small, slowly growing, painful lumps that are rarely associated with overlying skin discoloration (Table 1) . They are generally seen in pubescent patients. The infiltrating type is partially unencapsulated and can infiltrate surrounding tissues, causing muscular pain and neural deficits(4). Angiolipomas most frequently occur in upper extremities and the trunk(4).Angiolipoma of the foot is very rare. Only 4 case reports have been published in the literature(4). Our case is a case of angiolipoma over the ankle. Which was a single slow-growing lesion. The diagnosis of fatty tumors is late because usually, they are slow - growing and asymptomatic. Cosmetic deformities or compressive symptoms usually draw patient's attention towards the lesion However, angiolipoma presents as painful,small subcutaneous lesion, as in our case. Diagnostic modalities include USG,CT-scan, MRI.MRI is the "Gold standard" for presumptive diagnosis(1). CT and Ultrasound are less expensive and more rapid methods that can also be used for initial diagnosis(1). Screening USG of our case noted arteries and veins within a fat density mass. Definitive diagnosis is made by Histopathology. Histopathologically angiolipomas consist of sheets of mature fat cells separated by branching network of small vessels with fibrinous micro thrombi (1).In our case the lesion had additional components of multifocal aggregates of variable sized thin and thick walled blood vessels, forming vague lobules seen on myxoid fibrocollagenous stroma amidst the adipose tissue, suggestive of AV malformation making it a rare entity. There is no evidence that angiolipomas undergo malignant transformation due to lack of atypia, pleomorphism, or mitotic figures in both angiomatous or adipose components(5). The treatment is complete surgical excision for both infiltrating and non- infiltrating types(5). In some cases it is difficult for infiltrating type of angiolipomas to be excised completely as adequate excision would result in compromised function, hence treatment needs to be individualised. Due to its tendency of local recurrence , adjuvant Radiotherapy is considered(1). In our case it was possible to excise the specimen in toto.

No recurrence was noted on subsequent follow ups.

CONCLUSION:

The features were consistent with an AV malformation within a Lipoma, a rare presentation concerning histopathology and the location of the lesion. Also, when there is an ill-defined foot mass with fat component with variable enhancements on MRI/CT, angiolipoma should be considered as a differential diagnosis along with other fat tumors. These lesions should be treated by complete surgical excision as they don't have the potential to undergo malignant transformation .

ANGIO LIPOMA	CLINICAL FEATURES
FEATURE	COMMENTS
Also known as	Lipoma cavernosum , Telangiectatic lipoma , vascular lipoma
Incidence	5-17% of all lipomas
Common sites	Arm , Forearm , Neck, Trunk .
Usual size	Less than 2 cms
Pathological types	A) Infiltrating B) Non infiltrating
Pathological features	Present as regular lipomas , but more prominent vascularity
Presumed etiologies	Drugs : steroids , Indinavir .
Presentation	Painful , multiple small subcutaneous lesions .
Associated with	Familial multiple angio-lipomatosis
Diagnostic modalities	USG , CT , MRI , BIOPSY

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