A CASE OF PALMAR ANGIOLEIOMYOMA

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ABSTRACT: We report an unusual case of angioleiomyoma of the palm in a man aged 54 years. The patient presented with swelling and pain in right hand on holding any objects. Surgical excision was performed. Histology and immunohistochemistry supported the diagnosis of angioleiomyoma. The patient was asymptomatic after the operation.

KEYWORDS: Angioleiomyoma, palm, painful swelling.

INTRODUCTION: Angioleiomyomas are benign, solitary smooth muscle tumors that can arise anywhere in the body. They originate from tunica media layer of vessel walls and are uncommon in the hand. The majority of these tumors arise from veins and a few are reported arising from arteries in the hand. Diagnosis is usually made after surgical excision and histopathological and immunohistochemical studies.

CASE REPORT: A 54 years old man, trader by profession presented with pain and swelling in the left palm which had been present for two years. There was no history of trauma and the pain was aggravated on pressing the swelling or when the palm was used for some activity. The pain did not respond to analgesics at many times. There was no history of cold intolerance. On physical examination, there was a firm swelling located on the palm in the inter metatarsal space between second and third left metacarpal bones, measuring approximately 2x1 cm in size. The mass was slightly mobile with overlying intact skin without any erythema. Palpation of the mass caused severe episodic attack of pain.

The pre-operative work up included a complete blood count with differential cell count and chemistry profile all being within reference ranges. The conventional radiography disclosed no significant abnormality. MRI was not done.

Excision of the mass was performed under local anaesthesia. A skin incision was made overlying the swelling and a 2x1.5x1 cm sized well defined mass which was encapsulated and separate.

Fig. 1: (Gross photograph) the cut section was grey white to reddish with tiny cystic spaces.
From the surrounding tissues was removed by sharp and blunt dissections. The skin was closed with interrupted sutures and a bulky hand dressing was place.

**Fig. 2** (Microphotograph) H & E stained section (10X) showing thick muscle walled blood vessels (venous type) surrounded by and intermixed with fascicles of smooth muscle cells.

Grossly, the well circumscribed mass measured 2.2x1.5x1.5cm. The cut section was grey white to reddish with tiny cystic spaces [Figure 1]. Microscopically the section revealed a well circumscribed tumour composed of thick muscle walled blood vessels (venous type) surrounded by and intermixed with fascicles of smooth muscle cells [Figure 2]. There was no evidence of necrosis, mitoses or nuclear anaplasia. On immunohistochemistry staining, the tumour cells were diffusely and strongly positive for SMA. Moderate to strong positivity for desmin is noted in the smooth muscle cells. The histopathological and immunohistochemical features supported the diagnosis of angioleiomyoma. At 2 months follow up, the patient had no evidence of recurrence of the mass and the pain had completely disappeared.

**DISCUSSION:** Angioleiomyoma is a benign tumour of smooth muscle of the blood vessels, comprising approximately 4.4% of all benign soft tissue tumours. The tumours are most frequently found in persons between 30 and 60 years of age and most often in women. The tumours usually occur in the lower extremity and most often present as a small (less than 2 cm) slowly growing mass of several years duration. The tumour is usually round, forming a nodule that generally elevates the skin. The exact etiology of angioleiomyomas is unknown. Minor trauma, hamartoma changes, venous stasis, arteriovenous malformation and hormonal imbalance have been proposed as etiological features. In our case it may have been trivial unnoticed trauma to the hand.

Clinically, the most common complaint associated with a vascular leiomyoma of the hand is painful, slow growing swelling as was in our case. Most angioleiomyomas originate from veins and only few tumours involving the arteries have been reported so far. There are no specific imaging techniques for angioleiomyoma, but 3D MRI and 3D CTA imaging being performed before surgery help clinicians understand the relationship between a angioleiomyoma and the involved arteries. Angioleiomyoma does not have distinctive clinical presentation or radiographic features and is rarely diagnosed before surgery. The clinical differential diagnosis can include true or false aneurysm, hemangioma, lipoma, ganglion, pigmented villonodular synovitis, giant cell tumour of a tendon sheath, and neurofibroma. Therefore, histopathologic examination is required for a definitive diagnosis of angioleiomyoma. Based upon their dominant histological...
pattern, three subtypes are recognized\textsuperscript{[7]} (a) a solid type with compact muscle bundles and many slit like vessels, (b) a venous type with thicker muscular vessels and less compact intervening muscle bundles, and (c) a cavernous type with more dilated channels and a minor smooth muscle component.

The usual treatment for patients is simple excision of the mass and ligation of the feeder vessels.\textsuperscript{[4]} During surgery, careful dissection to prevent damage to surrounding tendons, vessels, and nerves is recommended. Most hand angioleiomyomas are benign but malignant transformation has been reported. If resection is complete, the chance of recurrence is minimal and the prognosis is excellent.

In conclusion, angioleiomyoma is a rare non-aggressive tumor of the hand. Its diagnosis must be considered when a patient presents with an isolated, slow growing painful mass in the palm. The prognosis is excellent after surgical excision without risk of recurrence.

REFERENCES:

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