ORIGINAL RESEARCH PAPER

General Surgery

Volume - 7 | Issue - 1 | January - 2017 | ISSN - 2249-555X | IF : 3.919 | IC Value : 79.96

ULNAR ARTERY PSEUDOANEURYSM FOLLOWING PENETRATING INJURY : A Case report

KEYWORDS: ulnar artery pseudoaneurysm, hypothenar hammer syndrome

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ABSTRACT *Ulnar artery pseudoaneurysm is a rare condition. In literature most of these aneurysms are related to distal ulnar artery and have been found complicating hypothenar hammer syndrome*

Here we report a case of pseudoaneurysm in the deep palmar branch of ulnar artery following a penetrating stab during routine household work using a sharp object. The diagnosis was suspected based on clinical examination and was confirmed by CT Angiography. The patient underwent successful excision of the pseudoanuerysm.

CASE DETAILS:

A 50 year old female was admitted with c/o swelling over the left palm for the past one month. She gives a history of penetrating trauma using a sharp object(knife) while doing household works for which she was taken to a nearby hospital and wound was sutured. Following this patient developed a swelling over the sutured wound which was painful but gradually increasing in size and was pulsatile.

Patient presented one month after the penetrating injury with swelling beneath the sutured wound which was painful and gradually increasing in size and was pulsatile.

On examination patients vitals were stable and there was no restriction of movements in the affected hand.

Swelling of size 2x2 cms in the left palm, tender, pulsatile in nature.

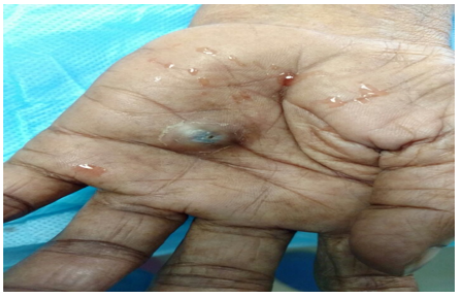

FIG-1:patient presented with a swelling in left palm which was tender n pulsatile in nature

Diagnosis was confirmed by CT angiography and successful excision of the pseudoanuerysm was done.

FIG-2: CT Angiogram showing a pseudoaneurysm in the deep palmar branch of ulnar artery

FIG-3: Intraoperative picture showing pseudoaneurysm being excised

Incision was made over the swelling and deepened till the pseudoaneurysm was identified and careful excision was done without effecting the other branches of the ulnar artery.
Postoperative period was uneventful.

Patient came for follow up after one month of excision and flow in the ulnar artery was normal as confirmed with a review CT Angiogram.

DISCUSSION:

Pseudoaneurysm of ulnar artery is an extremely rare condition. There have been cases reported of proximal ulnar artery pseudoaneurysm secondary to tension band wiring of olacranon fracture and non traumatic pseudoanerysm associated with eosinophilia, however there has been no reported case related to penetrating trauma.[2][3]. Pseudoaneurysms are usually caused by break in the endothelium secondary to either blunt or penetrating trauma with subsequent extravascular hematoma formation, reorganization of clot and recanalization of the vasculature through a newly formed false lumen[1]. There is absence of internal elastic lamina on histology. Ulnar artery pseudoaneurysm can be complicated by development of thrombosis, distal emboli, rupture and neurovascular compromise secondary to compression of the surrounding structures.

Diagnostic investigation includes duplex ultrasonography, magnetic resonance angiography and computed tomography angiography. The sonographic features of ulnar artery pseudoaneurysm includes a saccular cystic formation arising directly from the adjacent ulnar artery with internal turbulent blood flow [1]. CT angiography has increasingly replaced selective upper extremity arteriography, the previously accepted gold standard for diagnostic investigation.

The management of pseudoaneurysms can be surgical or non surgical. Surgery is indicated when the pseudoaneurysm is infected,

Volume - 7 | Issue - 1 | January - 2017 | ISSN - 2249-555X | IF : 3.919 | IC Value : 79.96

large enough to cause neurovascular compression requiring rapid removal and in case of failed non surgical treatment. Surgery may include excision of the pseudoaneurysm with ligation of the ulnar artery and microsurgical reconstruction of the ulnar artery by reanastomosis or an interposition vein graft with excision of the pseudoaneurysm [4] [5].

In our case successful excision the pseudoaneurysm was done without any ligation of the ulnar artery.

Non-surgical treatment of ulnar artery pseudoaneurysm may consist of US – guided compression, US - guided thrombin injection and endoluminal management [5]. Thrombin injection of small vessel pseudoaneurysm, however is associated with the risks of systemic thrombin administration, intravascular thrombosis, and distal ischemia [5].

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