

Atherosclerotic axillary artery aneurysm

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ABSTRACT

Atherosclerotic axillary artery aneurysms are extremely rare. They should be kept in mind in differential diagnosis in pulsatile masses in axillary region and should be treated surgically once they are diagnosed in order to prevent the vascular or neurologic complications. The present study reports a case of a true atherosclerotic axillary artery aneurysm arising in a 48 year old woman which presented with painless pulsatile mass in axillary region.

KEY WORD: Atherosclerosis, Aneurysm, Axillary artery.

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INTRODUCTION

Upper extremity aneurysms are relatively rare in comparison with other peripheral arterial aneurysms.¹ True aneurysms of the axillary artery

are extremely rare, most pulsatile masses in the region being pseudoaneurysms.² Surgical treatment of axillary artery aneurysm is important in avoiding thromboembolism and ischemia, which in turn can lead to gangrene and amputation of the affected extremity hence, operative management of such cases should not be delayed.³ The present study reports a case of a true atherosclerotic axillary artery aneurysm arising in a 48 year old woman which presented with a four month history of a painless pulsatile mass.

CASE REPORT

A 48-year-old women patient presented to our hospital with a complaint of axillary mass. She had no history of traumatic lesions, infective disease, or upper extremity embolic symptoms. There was no family history about aneurysm. Vital signs were in normal range, bilateral upper and lower extremity pulse were normal. Physical examination revealed a pulsatile hard mass in the right axillary area. Laboratory examination results were as follows; Hemoglobin 10,6 g/dl (12-18.1 g/dl), Creatinine 0,57 mg/dl (0,2-1,2 mg/dl), Cholesterol 201,33 0-200mg/dl, HDL:45,41 (30-60 mg/dl), LDL Chol: 136.73 mg/dl (0-190mg/dl), Tryglyserid: 95,93 (30-200 mg/dl), VDRL (-), RF (Romatoid Factor) :20.0< IU/ML (0-20iu/ml), CRP: 2,06 mg/dl (0,1-0,5 mg/dl) Estradiol 2,13 uIU/ml (0,2700-4,20 uIU/ml), HbA1c (Hemoglobin A1c): 4,85% (4,8-5,9), Sedimentation 1.hour

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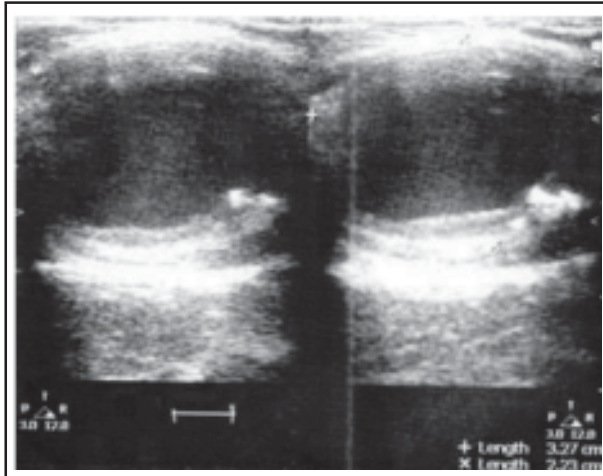


Fig-1: 3.27 cm- 2.23 cm axillary artery aneurysm with Doppler USG

48(0-20), 2.hour 87 (0-60), ANA (Anti-nuclear antibodies), Anti SM (Anti-Smith Antibody) and AMA (Antimitochondrial antibodies) were negative. The chest X-ray was normal. There was no pathological aneurysm in her cranial, thoraco-abdominal computerized tomography (CT) scans. Her echocardiography revealed no abnormalities. Her Doppler ultrasound revealed a 3.27-2.23 cm axillary artery aneurysm (Figure.1).

The patient underwent surgical management with general anesthesia. The aneurysm (Figure.2) was resected, saphenous vein was interposed. The post-operative course was optimal, and the patient was discharged on the 5th postoperative day. Pathologic review was consistent with an atherosclerotic aneurysm without thrombosis (Figure 3-4). She was

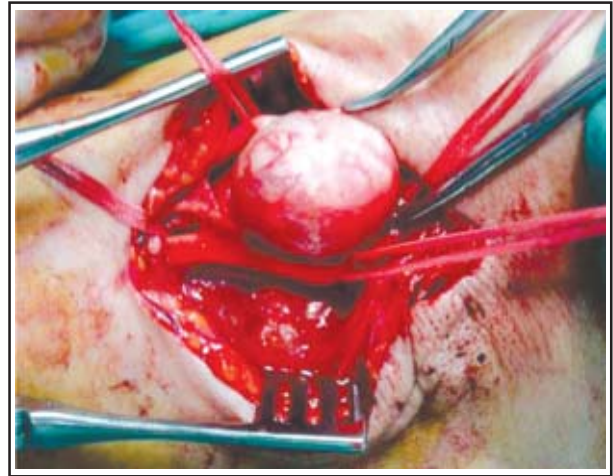


Fig-2: The appearance of axillary artery aneurysm in the operation.

discharged with 150 mg acetylsalicylic acid per oral once a day. In her 6 month postoperative follow up, she was asymptomatic.

DISCUSSION

Axillary artery aneurysms are rare and especially occur as a result of penetrating or blunt chest trauma.³ They may also occur iatrogenically or as a postobstructive lesion due to thoracic outlet syndrome (TOS) or chronic use of crutches.⁴ Atherosclerosis as a cause is very rare.⁵ Szuchmacher and colleagues reported 2 cases of atherosclerotic aneurysm⁶, Michalakos and co-authors reported one case⁵, Neumayer's group reported 2 cases⁷ and Morris-Stiff et al² reported one case of atherosclerotic aneurysm of the axillary artery. In our patient there were no

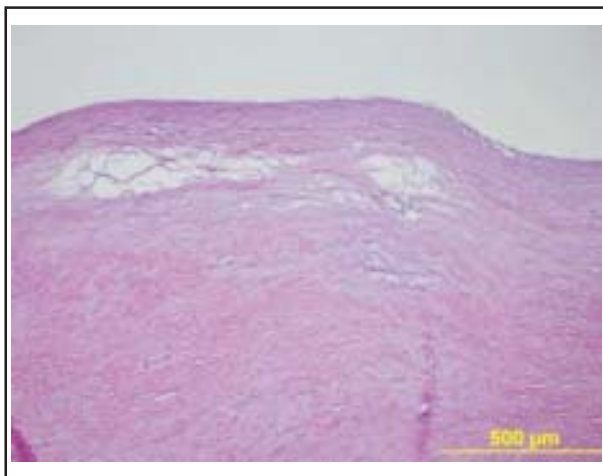


Fig-3: Pathological examination of axillary artery aneurysm. Mixoid degeneration on media and intima layer of artery (Hematoxylin-eosin X100).

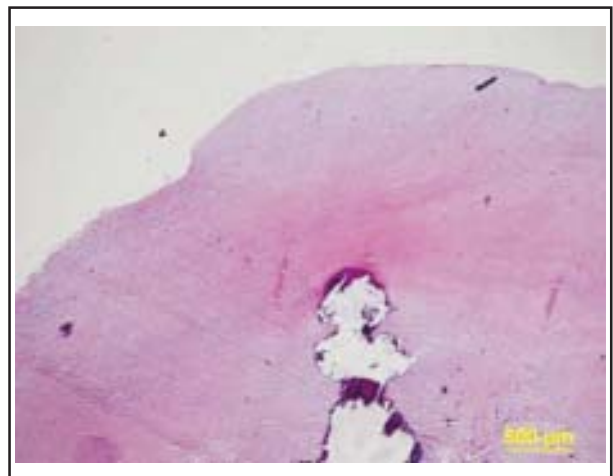


Fig-4: Pathological examination of axillary artery aneurysm. Calcification focus on media layer of artery. (Hematoxylin-eosin X100).

trauma, chronic use of crutches history and there were no evidence for TOS.

Axillary artery aneurysms can cause temporary or permanent neurologic defects by compressing the brachial plexus and they can also cause thromboembolic complications.^{3,6} There were no embolic or neurologic complications in our patient. Many vascular problems can be treated by endovascular interventions; the surgical approach is still the best choice.³ CT with contrast and doppler ultrasound might be used in diagnosis.¹⁻⁵ In our patient aneurysm was diagnosed with doppler ultrasound.

Prosthetic grafts might be used for reconstruction but saphenous vein grafting is better for long term patency.⁸ Brachial or axillary veins can also be used for reconstruction; however, because these veins tend to develop aneurysms, saphenous veins should be the first choice when available.⁴ We used saphenous vein graft after the resection of aneurysm in our patient. In conclusion, true atherosclerotic axillary artery aneurysms are extremely rare and should be kept in mind in differential diagnosis in pulsatile masses in axillary region and they should be treated surgically

once they are diagnosed in order to prevent the vascular or neurologic complications.

REFERENCES

1. Dent TL, Lindenauer SM, Ernst CB, Fry JW. Multiple arteriosclerotic arterial aneurysms. *Arch Surg* 1972;105:338-344.
2. Morris-Stiff G, Coxon M, Ball E, Lewis MH. Atherosclerotic axillary artery aneurysm. *Minerva Chir* 2008;63:61-63.
3. Tetik O, Yilik L, Besir Y, Can A, Ozbek C, Akcay A, et al. Surgical treatment of axillary artery aneurysm. *Tex Heart Inst J* 2005;32:186-188.
4. Tripp HF, Cook JW. Axillary artery aneurysms. *Mil Med* 1998;163:653-655.
5. Michalakis D, Lerais JM, Goffette P, Royer V, Brenot R, Kastler B. True isolated atherosclerotic aneurysm of the axillary artery. *J Radiol* 2003;84:1016-1019.
6. Szuchmacher PH, Freed JS. Axillar aneurysms. *N Y State J Med* 1980;80:795-796.
7. Neumayer LA, Bull DA, Hunter GC, McIntyre KE, Yoshino MT, Aguirre ML, et al. Atherosclerotic aneurysms of the axillary artery. A report of two cases and a review of the literature. *J Cardiovasc Surg* 1992;33:172-177.
8. McCarthy WJ, Flinn WR, Yao JS, Williams LR, Bergan JJ. Result of bypass grafting for upper limb ischemia. *J Vasc Surg* 1986;3:741-746.