



## Kasuistika | Case report

## Ulnar artery aneurysm – A rare cause of mass on wrist

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## SOUHRN

V tomto článku popisujeme velmi vzácný případ pacienta s aneurysmatem aterosklerotické etiologie na ulnární tepně. Mezi příčiny vzniku aneurysmatu patří poranění, infekce, periferní embolie, imunologické faktory, Ehlersův–Danlosův syndrom a arterioskleróza. U tohoto onemocnění je nutno stanovit diagnózu a léčit je, protože jinak může dojít k rozvoji ischemie v malíčku. Diagnózu periferní embolie je rovněž nutno vyloučit pomocí fyzikálního, ultrazvukového a angiografického vyšetření. Aneurysma ulnární tepny lze odstranit chirurgicky, například jeho resekci a rekonstrukci.

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## ABSTRACT

In this article we are going to discuss a patient with ulnar aneurysm due to atherosclerosis which is very rare in the literature. Among its reasons, trauma, infection, peripheral embolism, immunologic reasons, Ehlers–Danlos Syndrome and arteriosclerosis play role, its diagnosis and treatment is important since it can cause ischemia of finger. The diagnosis of peripheral embolism should also be excluded in such cases with physical examination, ultrasound and angiographic tests. For the treatment of ulnar artery aneurysm surgical procedures as resection and reconstruction may be performed.

## Introduction

Ulnar artery aneurysm is rare, generally located at the distal part of ulnar artery and proximal location is less frequently. Trauma and arteriosclerosis play etiological roles, diagnosis and treatment is important since it can cause ischemia of finger. Reports on this aneurysm are very rare in the literature [1].

Difference of the true aneurysms from pseudoaneurysms is, it contains all of the layers of arterial wall. Although, the true aneurysms of the femoral, popliteal and tibial artery are frequent, ulnar artery aneurysms are rare. In this article, we present a ulnar artery aneurysm case caused by atherosclerosis.

## Case report

A 55-year-old female patient applied to our clinic because of the mass she noticed on her left wrist 5 years ago, but recently felt pain on it. In her physical examination, there was no other pathology detected except a pulsatile mass. Upper extremity colored Doppler ultrasonography was requested for the diagnosis of the mass. According to the ultrasonographic results; 3 × 4 cm in size mass in the distal ulnar artery, which was thought to be a true aneurysm, was observed. The patient was recommended surgery because of the complaints of pain. Under local anesthesia and sedation, selective left upper extremity arteriography was applied to the patient. Distal ulnar artery aneurysm

was seen (Fig. 1). Pulsatile mass on the ulnar artery trace was opened longitudinally as 5 cm. Aneurysm has been reached as a result of a careful dissection and proximal and distal ulnar artery endings of the aneurysm have been reverted with strips (Fig. 2). On detecting that the palmar arch was open when the ulnar artery flow was blocked, the lumen of the aneurysm was opened, the inlet and outlet of the ulnar artery were controlled and diagnosis of true ulnar artery aneurysm was confirmed. By tying the proximal and distal ulnar artery mouths of the aneurysm sac, aneurysm was removed. There was atherosclerosis in the histopathologic evaluation of the aneurysm.

## Discussion

While trauma and atherosclerosis are more often among the reasons of true aneurysms, infection, autoimmune connective tissue diseases, various forms of non-inflammatory medial degeneration can play role in the etiology particularly in children [2]. In our case, there were no trauma and infection or immunologic reason. This is a case report regarding a rare case of the ulnar artery aneurysm. Diagnosis can be made by clinical findings usually; digital platismography and colored Doppler USG are helpful, and definitive diagnosis can be made by angiography in suspected cases. In surgical treatment, thoracic sympathectomy, ulnar artery aneurysm excision, ulnar artery ligation, anastomosis of ulnar artery by microsurgery or vein interposition can be performed [3,4]. Ulnar artery aneurysm and surgical treatment is reported in the literature very rarely [5]. In these type cases, Ehlers-Danlos syndrome should be considered [6].

## Conclusion

This is a case report regarding a rare case of the ulnar artery aneurysm. In this case, there were no trauma and infection or immunologic reason. Pathological investigation showed atherosclerosis and there was no Ehlers-Danlos syndrome finding. For the treatment of ulnar artery aneurysm, both resection and reconstruction of ulnar artery may be performed.

Ulnar aneurysms are very rare and can be treated surgically. In the pseudoaneurysms of the arteries such as ulnar, radial or peroneal artery, which relatively have no clinical importance, simple artery ligation or end-by-end anastomosis following the resection of the aneurysm sac can be applied.

In our case, because of the size of the aneurysm detected in the ulnar artery, end-by-end anastomosis of the ulnar artery following the excision was not possible and there was no complication observed during the 14 months follow-up of the patient after simple ligation.

### Conflict of interest

There is no conflict of interest.

### Funding body

None.

### Ethical statement

Authors state that the research was conducted according to ethical standards.

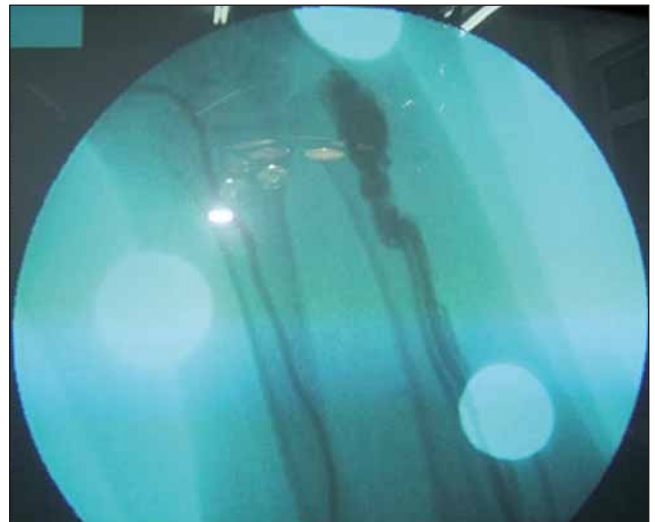


Fig. 1 – Selective left upper extremity arteriography showing distal ulnar aneurysm.



Fig. 2 – Ulnar aneurysm after dissection.

### Informed consent

Authors declare that informed consent was obtained from the patient participating in this study.

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