

Proximal Ulnar Artery Pseudoaneurysm in a Patient on Maintenance Hemodialysis

Kronik Diyaliz Hastasında Proksimal Ulnar Arter Pseudoanevrizması

ABSTRACT

Thrombotic complications of an arteriovenous fistula are more common than an aneurysm. The controversy regarding cannulation techniques continues. We present a case of proximal ulnar artery pseudo-aneurysm in a patient on maintenance dialysis after rope-ladder cannulation.

KEY WORDS: Hemodialysis, Pseudoaneurysm, Proximal, Ulnar artery

ÖZ

Arteriovenöz fistüllerin trombotik komplikasyonları, anevrizmatik komplikasyonlardan daha sık görülmektedir. Kanulasyon teknikleri üzerinde tartışmalar henüz bitmemiştir. Diyaliz hastasında, ip-merdiven tekniği ile kanulasyonu sonrası gelişen proksimal ulnar arter psödoanevrizmasını sunuyoruz.

ANAHTAR SÖZCÜKLER: Hemodiyaliz, Psödoanevrizma, Proksimal, Ulnar arter

INTRODUCTION

Aneurysm of the arteriovenous fistula at the puncture sites is not a rare complication in patient on maintenance hemodialysis. And, aneurysm of the native forearm arteries in such patients is expected to be seen at anastomosis line. Herein we present a case of proximal ulnar artery aneurysm after an accidental injury.

CASE

A 76-year-old woman was admitted to the hospital because of painful mass under her native arteriovenous fistula tract in the left forearm near the antecubital fossa. She had been diagnosed with end-stage renal disease due to hypertensive nephrosclerosis, and had been on maintenance hemodialysis treatment for 2 years. The patient was thin with a body mass index of 18.75 kg/m². She had mid-forearm radiocephalic arteriovenous fistula and a painful mass under the fistula. The mass was non pulsatile. Auscultation of mass was difficult due to close relationship with her native fistula but a poor murmur was detected after a careful

examination. The left radial and ulnar arteries were well palpable. There was no erythema or sinus. The pain had started after a traumatic venous puncture, complicated by a large ecchymosis, during a hemodialysis session one month ago. The ecchymotic area disappeared after three weeks. A duplex scan confirmed the diagnosis of a 3 x 3 cm pseudoaneurysm of the ulnar artery. After the diagnosis, the pseudoaneurysm was treated with local excision and reconstruction. The posterior border of the fistula was dissected carefully. The vein was pulled apart. The thrombotic capsule of the pseudoaneurysm was exposed between the brachioradialis and the flexor carpi radialis muscles (Figure 1). Then we excised the aneurysm and cleared all thrombotic material. The hole on the anterior aspect of the ulnar artery was seen and closed primarily. After the operation, the patient became asymptomatic.

CONCLUSION

Arterial aneurysms of the upper-extremity are uncommon and generally false aneurysms. There are several reports

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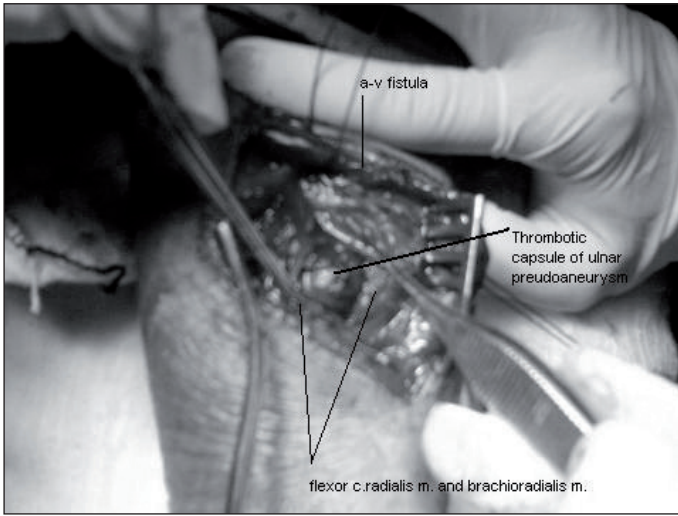


Figure 1: Thrombotic capsule of ulnar pseudoaneurysm after separating the forearm muscles.

demonstrating distal ulnar artery aneurysms complicated by the hypothenar hammer syndrome (1) but there is only one case report describing an asymptomatic, non-traumatic pseudoaneurysm of the proximal ulnar artery with eosinophilia in a 54-year-old man and this situation was thought to be related to a hypereosinophilic syndrome (2). Upper extremity pseudoaneurysms may also form along the length of the vascular access due to laceration during needle puncture in patients on hemodialysis (3) but they are related to the fistula. Our patient was cachexic and

cannulated with the rope-ladder technique. A pseudoaneurysm had developed after a traumatic venous fistula puncture where the ulnar artery under the fistula was wounded. To the best of our knowledge, this is the first report demonstrating a traumatic proximal ulnar artery pseudoaneurysm in a hemodialysis patient in the English literature. It has been shown that, compared with the rope-ladder technique, the buttonhole method offers the advantage of an easier cannulation procedure with less bad sticks and is beneficial for patients with a fistula that is difficult to cannulate (4). This technique can be useful in cachexic hemodialysis patients with a forearm radiocephalic fistula along the ulnar artery in the fistula tract to avoid an undesired complication as in our patient.

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