

Pseudoaneurysm of the Ulnar Artery: A Case Report

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Abstract**Case Report**

Pseudoaneurysms of peripheral arteries are very rare, and mostly these are the result of penetrating injuries. The diagnosis of a pseudoaneurysm must be evoked early and should not be ignored, despite its rarity, in front of any pulsatile and painful mass or other evocative signs following a trauma, most often penetrating, because it can lead to complications (thrombosis, emboli, compression of adjacent structures such as nerves and neighboring vessels) with important consequences. Here, we report a case pseudoaneurysm of ulnar artery and its radiological diagnosis approach method.

Keywords: Pseudoaneurysm, ulnar artery, Computed tomography angiography.

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INTRODUCTION

Forearm pseudoaneurysms are most often of traumatic origin. It is a rare pathology, often unrecognized, with sometimes serious consequences, because it is complicated by thrombosis or embolism. The objective of this work is to demonstrate the interest of imaging in the diagnosis of post-traumatic aneurysms.

CASE REPORT

We report the case of a 3-year-old male child who had suffered a minimal penetrating trauma to the anterior aspect of the left forearm by a sharp object.

One month later, a painless swelling appeared opposite the scar. The clinical examination revealed a pulsatile, pulsating mass on the anteromedial aspect of the left forearm, left radial pulse was present and the rest of the examination was unremarkable. The arterial Doppler ultrasound showed the presence of a well-limited hypoechoic formation in contact with the ulnar artery, which was the site of turbulence, producing a Ying Yang sing on the color Doppler, with the presence of an endoluminal thrombus (figure 1). The Computed tomography angiography (CTA) confirmed the presence of a false aneurysm of the left ulnar artery with an endoluminal thrombus, with good downstream peripheral vascularization (figure 2).

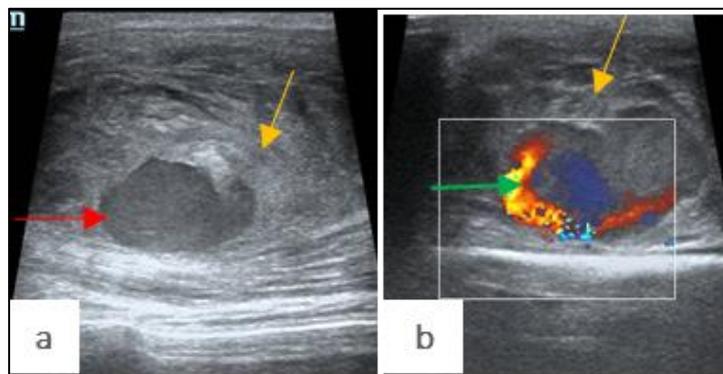


Figure 1: Cross-sectional ultrasound in B mode (a) and color Doppler mode (b): pseudoaneurysm (red arrow) of the left ulnar artery in the form of a hypoechoic lesion in contact with the ulnar artery, well limited and with turbulence, producing a Ying Yang sing in color Doppler (green arrow) with the presence of an endoluminal thrombus (yellow arrow)

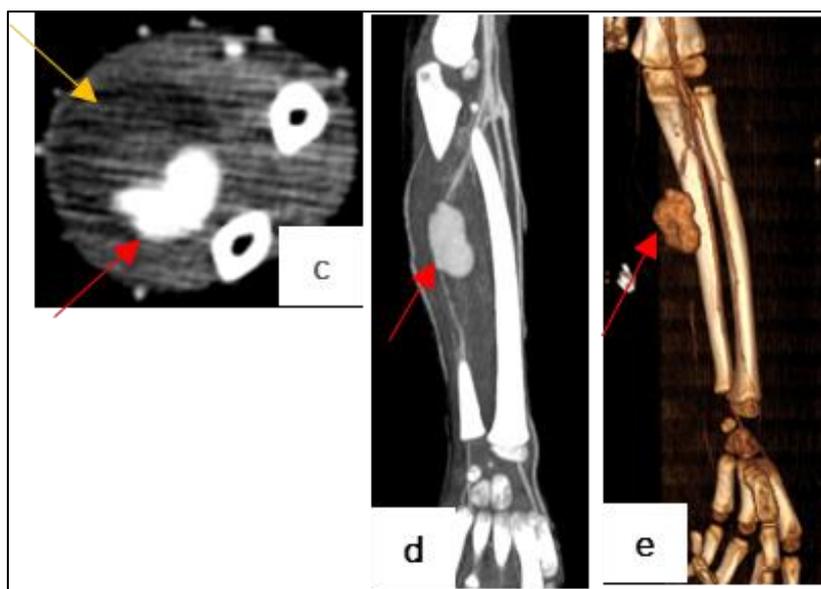


Figure 2: Angioscanner of the left upper limb in axial section (c) oblique coronal reconstruction MIP (d) and VRT mode (e): pseudoaneurysm of the left ulnar artery (red arrow) with partial thrombus (yellow arrow)

DISCUSSION

Pseudoaneurysms of the ulnar artery are uncommon, especially in young people. They are most often secondary to open trauma, either after a violent trauma, in which case the diagnosis is easy, or after repeated microtrauma. The evolution of these aneurysmal lesions is marked by complications such as thrombosis and distal emboli, which is why the clinical presentation is often vascular in appearance. A notion of direct trauma, associated with the appearance of a pulsatile mass opposite, is sufficient to evoke the diagnosis, even in the absence of other signs. The diagnosis is based on imaging. Firstly, the echo-Doppler (ED), which is efficient but can be misinterpreted, reveals an aneurysmal dilatation of the ulnar artery. The ED will also assess the patency of the distal arteries. It is an essential examination if the decision is made to abstain and simply surveillance. Arteriography remains the reference examination. It is useful for the topographic diagnosis and the search for distal embolic complications and for the preoperative evaluation. MR angiography can usefully replace arteriography, thanks to its safety and the quality of its images. A Computed tomography angiography (CTA) is an alternative to this examination, as shown by our observation, it allows to carry out a lesion mapping and to study the permeability of the downstream arteries, the choice depending on the teams. The only point that is open to discussion is the therapeutic attitude. Some authors recommend systematic surgical treatment with revascularization, while others advocate abstention.

CONCLUSION

The diagnosis of ulnar artery pseudoaneurysm in children, despite its rarity, must be mentioned in the presence of evocative clinical signs, generally occurring in a traumatic penetrating context. If the diagnosis is made by echo-Doppler, the preoperative workup requires angioscan or even MR angiography, which can replace arteriography. Surgical revascularization remains the preferred treatment.

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