

Adventitial cystic disease of the radial artery

A. Kerzmann¹, A.C. Lespagnard², J.O. Defraigne¹

¹Dept of Cardiovascular and Thoracic Surgery, CHU Liege, Belgium

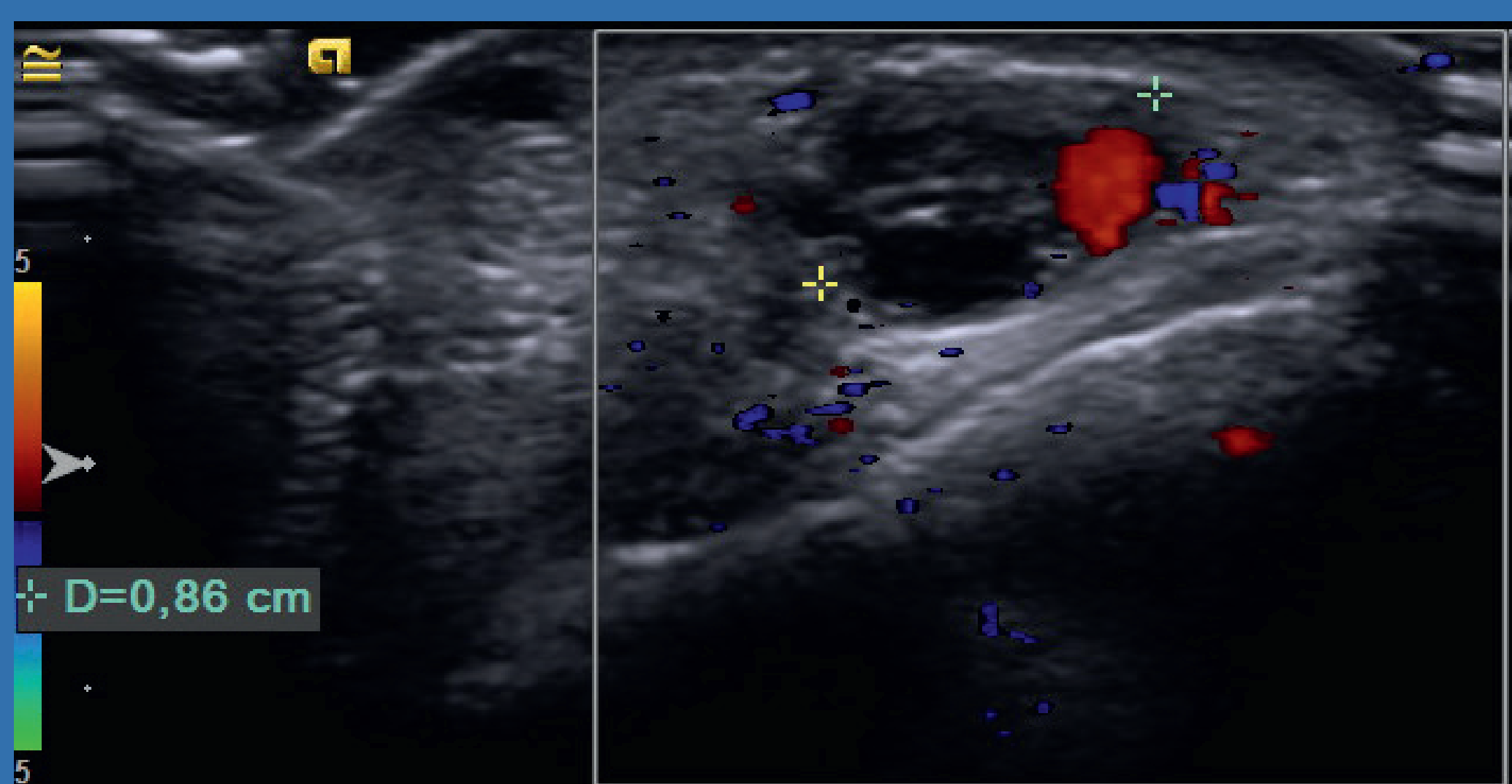
²Dept of Vascular and Thoracic Surgery, Sankt Nikolaus Hospital Eupen, Belgium

Introduction

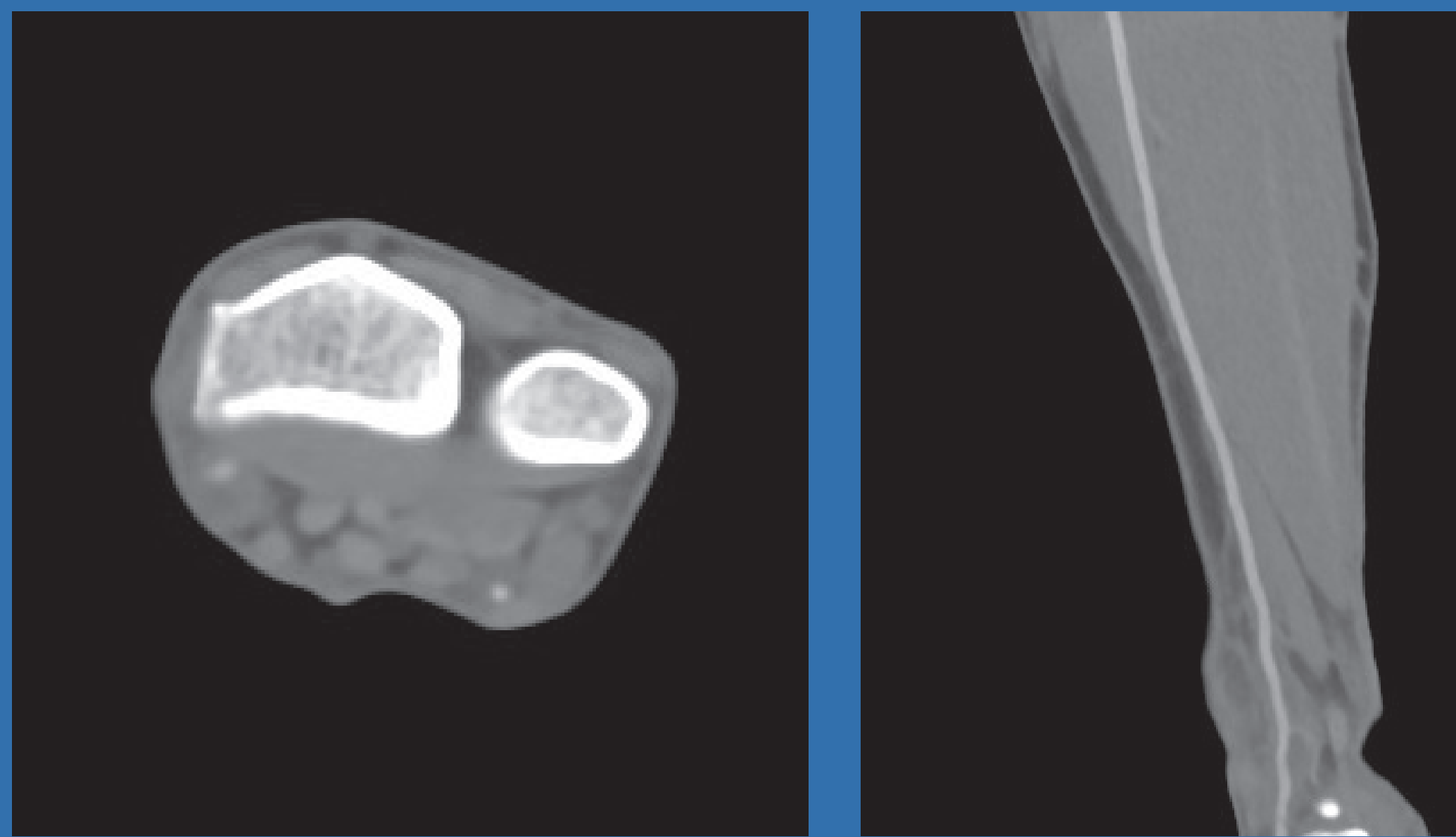
Adventitial cystic disease is a non-atherosclerotic arteriopathy in which mucinous cyst develops within the adventitia of arteries and veins. It was first described in 1947^[2]. The most common vessel involved is the popliteal artery^[1]. It is more common in men than women (5:1)^[2].

There are only a few cases reported in the literature about adventitial cystic disease of the radial artery. Here is one case report.

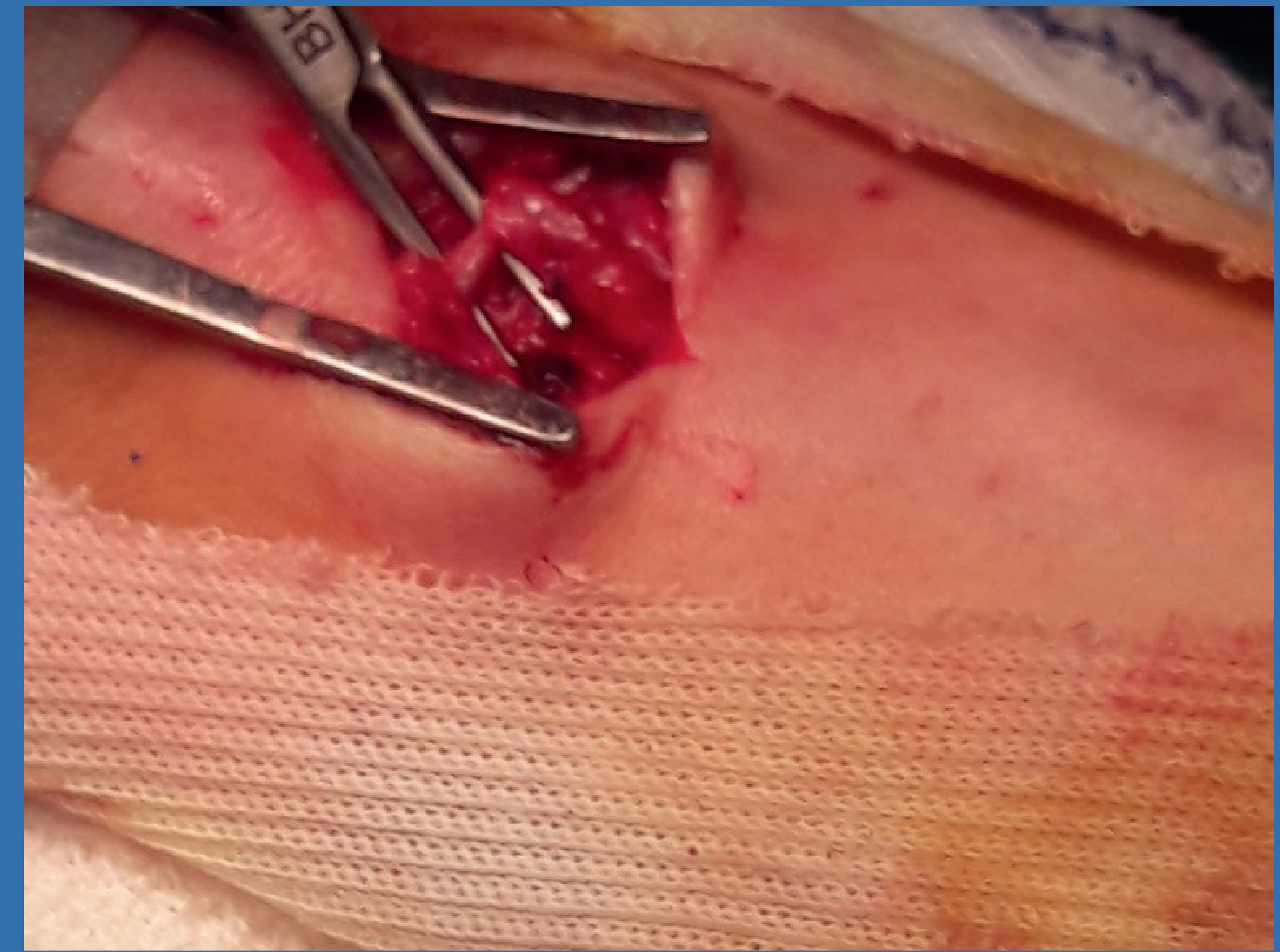
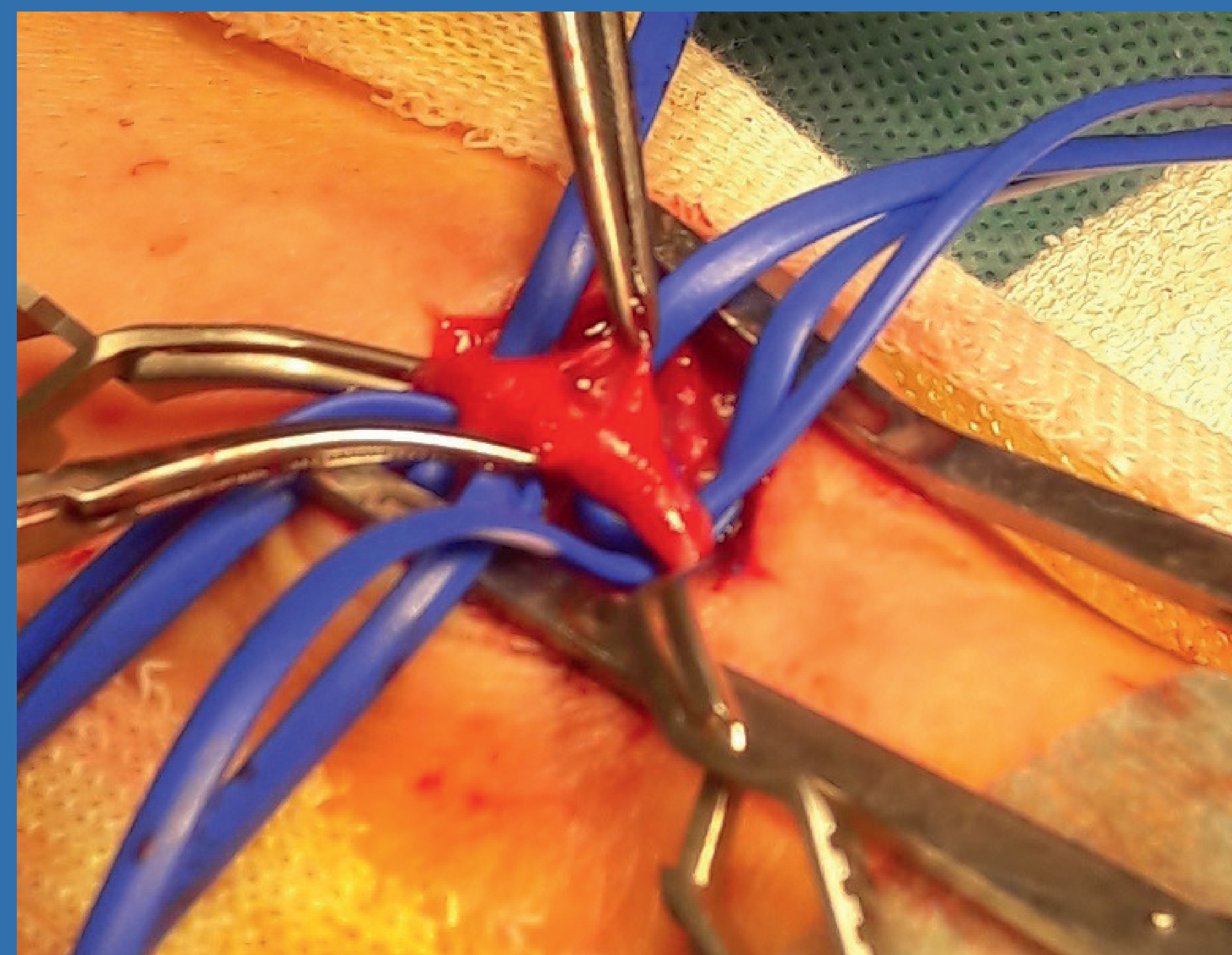
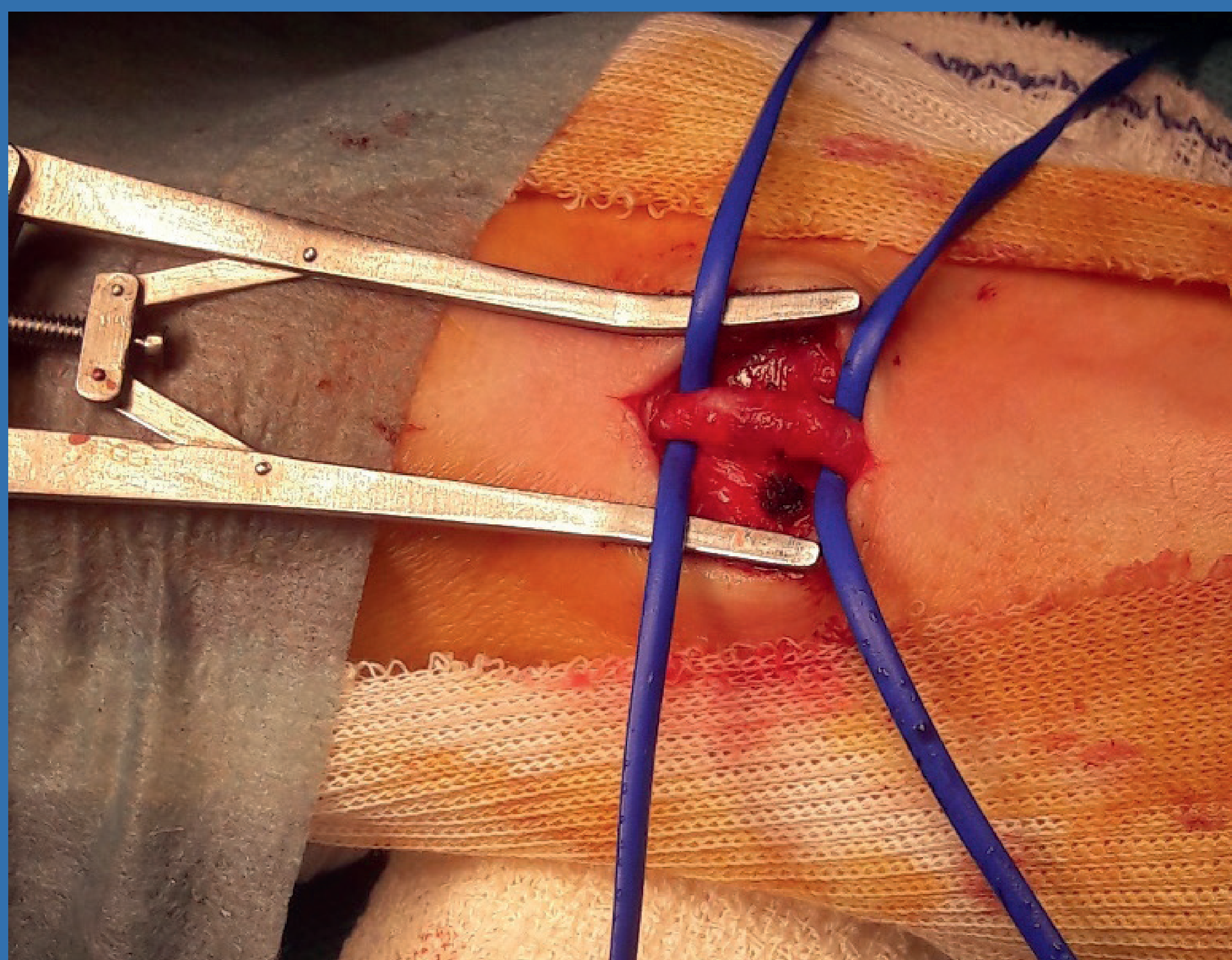
Case Report



A 36 years old caucasian man complained of pulsatile mass at the left wrist appeared a few months ago. He didn't have left hand weakness. He had no past history. He was carpenter and left-handed. Ultrasound and computed tomography showed 8 millimeters adventitial cyst of the radial artery.



Because the patient was invalidated, surgery was realized. Under general anesthesia, resection of the cyst with radial artery preservation was performed. There was no complication. After one year follow up, the patient is asymptomatic.



Discussion

Since the review article of Desy and Spinner in 2014^[1], the etiology of cystic adventitial disease appears to be an articular pathology with synovial liquid filling the adventitial cysts. Others theories are repeated trauma, de novo cystic formation from a systemic process or remnant mesenchymal cell rests during development. In the articular hypothesis, trauma to or degeneration of the joint might cause capsular defect. Synovial fluid follows a low pressure way into the adventitia of articular arterial branches. Cyst formation is influenced by synovial pressure what could explain spontaneous symptom resolution or intermittent symptomatology. Repeated trauma has obviously played a role in our case. Thus adventitial cystic disease of the radial artery can be an occupational illness.

MRI is the best investigation to identify joint connections. We had only CT scan and were not able to see clear articular connection.

The most common and most favorable treatment reported is cyst resection and vessel reconstruction with venous autograft. Cyst recurrence occurs for this approach in 1 to 7%. Percutaneous angioplasty or aspiration have more recurrence, probably because the articular connection remains. In our case we performed only cyst excision but we were able to ligate the joint connection.