

Radial artery pseudoaneurysms: a complication of transradial coronary procedures in patients on chronic antithrombotic therapy (rivaroxaban, VKA)

Tętniaki rzekome tętnicy promieniowej: powikłanie zabiegów z dostępu promieniowego u pacjentów przewlekle leczonych przeciwkrzepliwie (riwaroksaban, VKA)

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Radial access, performed by experienced operators, is recommended over transfemoral access for coronary angiography and percutaneous coronary intervention (PCI) in acute coronary syndromes (ACS). Radial artery pseudoaneurysm (RAP) is a possible complication, which can occur after the transradial coronary procedures. Clinical presentation includes pain, swelling, and a pulsatile mass with tendency to enlargement. It can be complicated by infection, formation of an abscess, risk of rupture, arterial occlusion or nerve compression. We report two cases of surgically treated right RAP — both in females with ACS and chronic antithrombotic therapy. The first patient was a 76-year-old woman with a history of hypertension, hypothyreosis, and paroxysmal atrial fibrillation on rivaroxaban treatment. The ACS was treated typically (acetylsalicylic acid [ASA] and clopidogrel). She underwent the diagnostic procedure, which revealed non-significant atherosclerosis in the coronary tree. The coronary angiography was performed through the right radial artery, using a 6 F sheath and diagnostic catheters. A 5000 IU of heparin was administered through the sheath. The arterial sheath was withdrawn after the procedure, with a compressive dressing for 2 h. The pseudoaneurysm was diagnosed 4 months after discharge and confirmed using colour Doppler ultrasonography (USG) with a typical to-and-fro flow in its neck (Figs. 1, 2). The patient was qualified to surgical treatment — the pseudoaneurysm was resected and the hole in radial artery was sutured. The second patient was an 86-year-old woman with a history of diabetes mellitus, hypothyreosis, atrial fibrillation with an ablation of A-V junction, and DDD-pacemaker implantation. She was treated chronically with vitamin K antagonists (INR 3.1 on admission). Due to the ACS she received ASA and clopidogrel. She underwent the diagnostic coronary angiography using the right radial approach with the equipment and manner stated above, which confirmed tight stenosis in the proximal part of the left anterior descending artery (LAD). The PCI of the LAD with second-generation drug-eluting stent implantation was done using a 6 F guiding catheter. The strategy of arterial sheath removal and a compressive dressing was the same. One day after the procedure the pseudoaneurysm was diagnosed and confirmed in USG. Compression using a TR Band (Terumo) was unsuccessful and the patient was treated surgically. RAP after coronary intervention can occur, especially with multiple punctures or in patients on oral anticoagulation. Adequate compression procedure following puncture of the radial artery for maintaining haemostasis is the key to prevention of such complication. After confirmation of the pseudoaneurysm (USG) the treatment is needed — an additional compression or vascular surgery, to prevent further complications. It is reasonable to establish a program of vascular surgery cooperation in institutions with an endovascular treatment ward.



Figure 1. Radial artery pseudoaneurysm

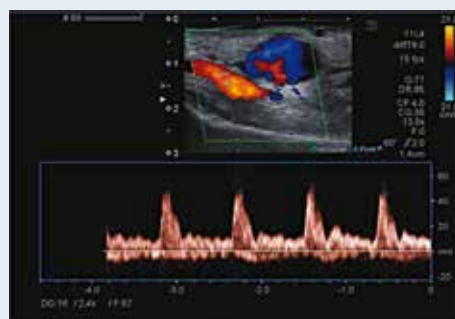


Figure 2. Typical to-and-fro flow

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Conflict of interest: none declared

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