## STUDIUM PRZYPADKU / CLINICAL VIGNETTE

## Right coronary artery aneurysm with fistula into the coronary sinus in patient with systemic lupus erythematosus

Tętniak prawej tętnicy wieńcowej z przetoką do zatoki wieńcowej u pacjentki z toczniem rumieniowatym układowym

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A 65-year-old woman was hospitalised in the Department of Hypertensiology, Angiology and Internal Diseases due to occasional chest pain and unsuccessfully treated hypertension.

The patient had systemic lupus erythematosus (diagnosed in 2002 and treated with Metypred for 7 years). *Physical examination:* without deviation. *ECG:* sinus rhythm 67/min; q in III, aVF; negative T in III, incomplete RBBB. *Laboratory tests:* ESR 48 mm/h;

antibodies ANA > 1:300; anti-Ro (anti-SSA) 8.3; anti-ds DNA < 1:10. *Stress ECG*: (interrupted in 9 min, 10.8 METs, due to fatigue): 1 mm ST depression in II, III, aVF. *Angiography*: LM very short, no atherosclerotic lesions; LAD and LCX no atherosclerotic lesions; RCA dilated (aneurysm). *Cardiac magnetic resonance imaging (MRI)* [cm]: LVIDd 5.1; LA 4.0; RVDd 3.0; LVPWd 0.8; IVSd 1.0; Ao 2.0/3.1/2.5; mild mitral and tricuspid regurgitations; EF 69%; no perfusion myocardial impairment; dilated RCA (6.5 mm) (Fig. 1). *Coronary computed tomography angiography*: LM and LCX without coronary stenosis, LAD in distal part of proximal segment — atherosclerotic plaque (20–30% narrowing), RCA dilated to 9 mm proximally and 5 mm distally (Fig. 2), winding, length about 40 cm (Fig. 3), in the distal part — the fistula to the coronary sinus (Fig. 4).

In the literature data, coronary aneurysms are recognisable in nearly 5% of those undergoing angiography. When large, they may predispose to turbulent blood flow and thrombus formation. Of all the coronary arteries, the RCA is the most commonly dilated and predisposed to fistula formation. The most common aetiologies of an aneurysm are: atherosclerosis (50%), hereditary diseases (20–30%), vasculitis (10–20%) and damage (also iatrogenic). Fistulas between the coronary vessels are usually asymptomatic and discovered incidentally, but they can lead to steal syndromes causing myocardial ischaemia.

In this case, due to the coexistence of systemic lupus erythematosus, the inflammatory aetiology of the RCA aneurysm should be recognised. Due to the relief of angina after blood pressure normalisation and the absence of myocardium perfusion impairment, conservative treatment was continued. The MRI failed to show the fistula of dilated RCA. This leads to the conclusion that coronary artery tomography is more accurate for the diagnosis and monitoring of this pathology. The patient remains in clinical observation with effective treatment comprising perindopril (5 mg), indapamide (2.5 mg), amlodipine (10 mg) and aspirin (150 mg).



Figure 3. Coronary tomography. Elongation of RCA — total length 403 mm



Figure 1. Cardiac MRI. Dilated RCA

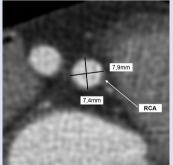


Figure 2. Coronary tomography. Dilated RCA

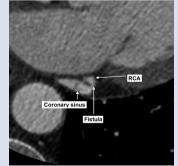


Figure 4. Coronary tomography. RCA with the fistulous connection to the coronary sinus

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Conflict of interest: none declared