

Interrupted aortic arch: late diagnosis of congenital malformation

Przerwanie łuku aorty: późne rozpoznanie wady wrodzonej

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Interrupted aortic arch (IAA) is an extreme form of aortic coarctation. It occurs in 1.5% of newborns with congenital heart disease and is characterised by complete luminal and anatomic discontinuity between ascending and descending aorta. A 53-year-old male, smoker, with hypertension and obesity was admitted to our hospital for unstable angina. The patient had had endocarditis complicated with acute aortic insufficiency 12 years ago. He underwent emergency surgery at that time of aortic valve replacement and repair of ventricular septal defect. Aged 42, he underwent pacemaker implantation due to third degree atrioventricular block.

Because of the typical angina symptoms and multiple risk factors, the patient was qualified for coronary angiography. Cardiac catheterisation, by accessing the right femoral artery route, showed occlusion of the aorta distal to the left subclavian artery (Fig. 1). Computed tomography (CT) angiography and transthoracic echocardiography, which were carried out immediately, confirmed a congenital malformation — IAA (Figs. 2, 3). During the same hospitalisation, the second coronary angiography via the right radial aorta revealed critical stenosis of the circumflex branch (Fig. 4). Coronary angioplasty with implantation of a bare metal stent was done at once.

IAA in an adult is so rare that our review of the literature revealed only 19 cases. A few cases of the coexistence of IAA with collateral circulation between ascending and descending aorta enable the survival of the neonatal period and make possible a diagnosis in an adult.

We have described another case in which congenital malformation was first diagnosed at the age of 53 during coronary angiography confirmed by CT.



Figure 1. Cardiac catheterisation: occlusion of the aorta distal to left subclavian artery



Figure 2. Three-dimensional computed tomography angiography: interrupted aortic arch

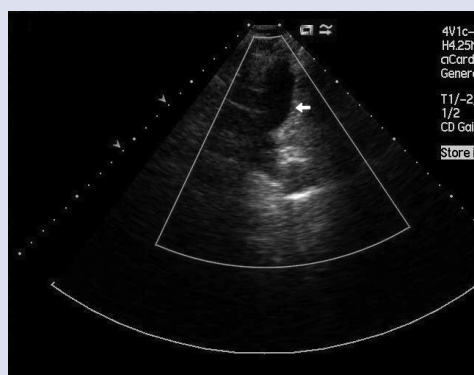


Figure 3. Transthoracic echocardiography: interrupted aortic arch

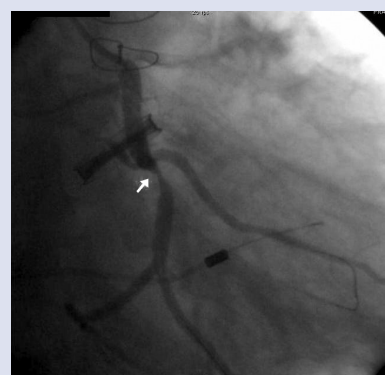


Figure 4. Coronary angiography: critical stenosis of circumflex branch

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