

Complete thrombosis of the ductus arteriosus could be the option to be alive in the seventh decade of life without specific symptoms

Bezobjawowe przeżycie do 64. roku życia z całkowitą zakrzepicą przewodu tętniczego

Slobodan Tomic, Aleksandra Tomislav Nikolic, Dragana Unic-Stojanovic, Slobodan Micovic

Dedinje Cardiovascular Institute, Faculty of Medicine, University of Belgrade, Serbia

We report an adult male patient, aged 64 years, without subjective symptoms. He used to have frequent colds and occasionally pneumonia in his childhood. Nine years prior to hospitalisation, a mild dilatation of the aorta was noticed on X-ray and confirmed with transthoracic echocardiography (TTE). Seven years later, during treatment of chronic bronchitis, the attending pulmonologist insisted on checking the condition of the aorta. Nearly two years thereafter transoesophageal echocardiography (TEE) was performed and a 1.2-cm-thick parietal thrombus was noticed in the level of the wall of the aortic arch, in the short axis. A globular structure (an aneurysm) filled with thrombotic mass was also visible. Then, 64 multislice computed tomography of the aorta with contrast was performed. It showed a saccular aneurysmal expansion (maximum diameter of 7.5 cm) with total parietal thrombosis, at the level of aortic arch (lower wall) (Fig. 1). It was actually the aneurysm of the ductus arteriosus which compressed the left pulmonary artery (Fig. 2). Resection of the aneurysm with reconstruction of the aortic arch by prosthetic graft was performed in circulatory arrest. The defect from the side of the pulmonary artery was closed with a synthetic patch. Five years after the surgery, the patient is asymptomatic, with normal life activities. Aneurysm of the ductus arteriosus is a rare, but potentially dangerous complication in adults. It may be spontaneous or acquired as a result of surgical closure of a transit duct. In angiographic studies, the insertion of an obliterated ductus arteriosus from the aortic side of the wall is encountered in approximately 9–26% of adults. Spontaneous aneurysm of the ductus arteriosus (SADA) in adults usually shows obliteration from the pulmonary side of the ductus. The presence of an enlarged calcified mediastinal mass adjacent to the left side of the trachea associated with the characteristics of the trachea or lungs compression (dyspnoea, wheezing, haemoptysis), or hoarseness due to paralysis of the laryngeal nerve or chest pain (caused by internal haemorrhage or pressure on intrathoracic structures) are usually the most frequently described symptoms in patients with non-patent ductal aneurysm. Because these aneurysms are large, there is a risk of spontaneous rupture or erosion of the pulmonary artery, the main bronchus, or the oesophagus, which increases the need for urgent operative therapy. The most frequent complications of an aneurysm of the ductus arteriosus in adults are ruptures, embolisms, and endarteritis (infective arteritis). SADA could be visualised as the mass in the aortopulmonary window on chest X-ray. In the presented case, because of the lack of communication between the aorta and the pulmonary artery, the TTE did not verify the flow, which is possible in the case of non-obstructive aneurysm of the ductus arteriosus. Nuclear magnetic resonance or computed tomography with contrast are ideal for displaying the vascular nature of the mass. Surgery is recommended for all spontaneous aneurysms larger than 3 cm in diameter if symptoms from adjacent organs due to the impact of an aneurysm are present or if an aneurysm is progressively increased.

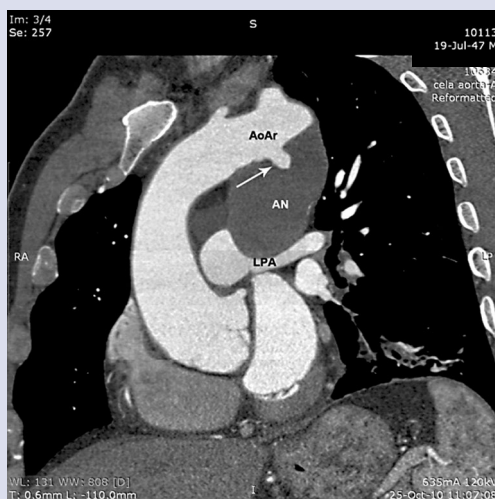


Figure 1. Multislice computed tomography of the thorax. Large aneurysm of the ductus arteriosus is localised between the aortic arch (arrow) and the left branch of the pulmonary artery (LPA). An aneurysm (AN) is completely filled with thrombus (arrow in the level of the aortic arch [AoAr] indicates the portion that is not thrombosed aneurysm)

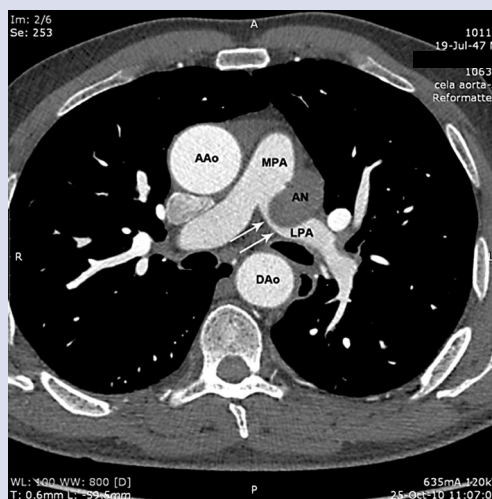


Figure 2. Multislice computed tomography of the thorax. Aneurysm (AN) of the ductus arteriosus compresses (double arrow) the left branch of the pulmonary artery (LPA); MPA — main pulmonary artery; AAo — ascending aorta; DAo — descending aorta

Address for correspondence:

Asoc. Prof. Aleksandra Tomislav Nikolic, Dedinje Cardiovascular Institute, Faculty of Medicine, University of Belgrade, Serbia, e-mail: nikolicdrsasa@gmail.com

Conflict of interest: none declared

Kardiologia Polska Copyright © Polskie Towarzystwo Kardiologiczne 2017