

Aortopulmonary fistula secondary to giant ascending aortic aneurysm recognized by computed tomography

Ilona Michałowska¹, Jarosław Kuriata², Paweł Kwiatek¹,
Elżbieta Florczak³, Mariusz Kuśmierczyk²

¹Department of Radiology, Institute of Cardiology, Warsaw, Poland

²Department of Cardiac Surgery and Transplantology, Institute of Cardiology, Warsaw Poland

³Department of Hypertension, Institute of Cardiology, Warsaw, Poland

Aortopulmonary fistula (APF) is a rare, late complication of a thoracic aneurysm, which may result from trauma, septic process or aortic surgery. The estimated prevalence of APF is about 3.7%.

Hemodynamic consequences of APF leads to the development of left-to-right shunt, acute pulmonary oedema and right heart failure.

The reported a case herein is of a 63-year-old male hospitalized due to worsening of congestive heart failure over a period of 1 month.

Chest radiography revealed a widened mediastinum and pleural effusion (Fig. 1A). Echocardiography showed an aneurysm of the ascending aorta suspected of dissection. The left ventricular diastolic diameter was dilated to 76 mm and ejection fraction was reduced to 40%. Doppler echocardiography showed severe tricuspid regurgitation.

Computed tomography confirmed a giant aneurysm of the ascending aorta (10.1 cm) with chronic, limited dissection, compression of the superior vena cava and revealed APF to the main pulmonary artery with left-to-right shunt (Fig. 1B–E).

The patient underwent emergency surgery, which showed aortic degenerative disease, the aneurysm of the ascending aorta with chronic dissection and APF without infection or vegetation inside the aorta (Fig. 1F). The surgery involved supracoronary ascending aortic replacement, closing the fistula and implantation of a tricuspid ring.

The diagnosis of APF may be difficult but it is necessary to exclude a fistula in patients with an aortic aneurysm and developing symptoms of congestive heart failure.

Conflict of interest: None declared

Address for correspondence: Dr. Ilona Michałowska, Department of Radiology, Institute of Cardiology, ul. Alpejska 42, 04–628 Warszawa, Poland, tel/fax: +48 22 343 41 68, e-mail: imichalowska@ikard.pl

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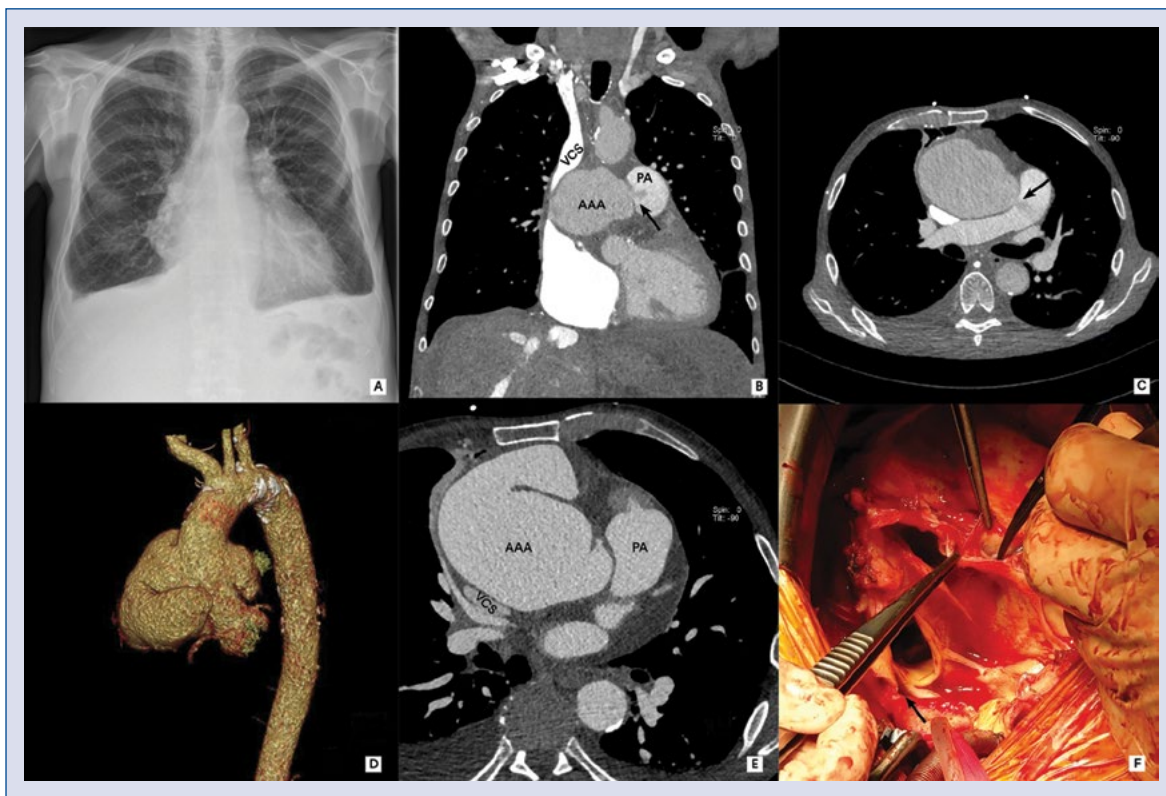


Figure 1. A. Chest X-ray showed widening of the middle mediastinum and double pleural effusion; B–E. Computed tomography angiography revealed an aneurysm with limited dissection, compression of the superior vena cava and communication between the aortic aneurysm and main pulmonary artery (aortopulmonary fistula — arrows); F. Intraoperative view of the aortopulmonary fistula (arrow) and chronic dissection; AAA — ascending aortic aneurysm; PA — pulmonary artery; VCS — vena cava superior.