

Multiple coronary artery-pulmonary artery fistulas in patients with chronic thromboembolic pulmonary hypertension

Kronik tromboembolik pulmoner hipertansiyonlu bir hastada koroner arterler ile pulmoner arter arasında gelişen çoklu fistüller



The fistula from coronary artery to pulmonary artery is a well-known abnormality. Chronic thromboembolic pulmonary hypertension (CTEPH) is a rare and fatal disease. Broncho-pulmonary or aorto-pulmonary collaterals have been reported in this disease. However coronary-pulmonary collaterals have not been reported before.



Figure 1. Axial helical CT angiogram image shows endothelialised thrombus (arrow) along the lateral wall of the right pulmonary artery
CT - computed tomography

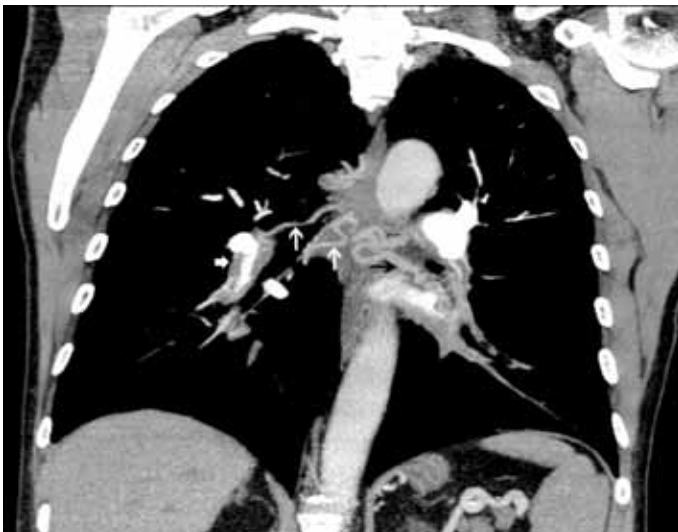


Figure 2. Multiple mediastinal vessels thought to be due to coronary-to-pulmonary collaterals surrounding the both lower lobe pulmonary arteries (R&L) (arrows) with a chronic thrombus (arrowhead) are seen on coronal multiplanar reformation CT angiogram image

CT - computed tomography

A 61-year-old man was admitted to our clinic for an increasing dyspnea on exertion. Pulmonary hypertension was detected by echocardiography and it was confirmed by heart catheterization. A thorax multislice computerized tomography (MSCT) showed thrombi in both pulmonary arteries (Fig. 1). Moreover, multiple mediastinal vessels, surrounding the both lower lobe pulmonary arteries were also detected (Fig. 2). CTEPH was diagnosed and pulmonary thromboendarterectomy (PEA) was planned. Coronary angiography performed before the operation disclosed normal coronary arteries. However, three coronary fistulas from two coronary arteries toward to pulmonary artery territories were noticed. One of them originated from mid portion of left anterior descending artery (Fig. 3) and two others-from right coronary artery (Fig. 4). Another one was originating from conus branch, other fistula was arising

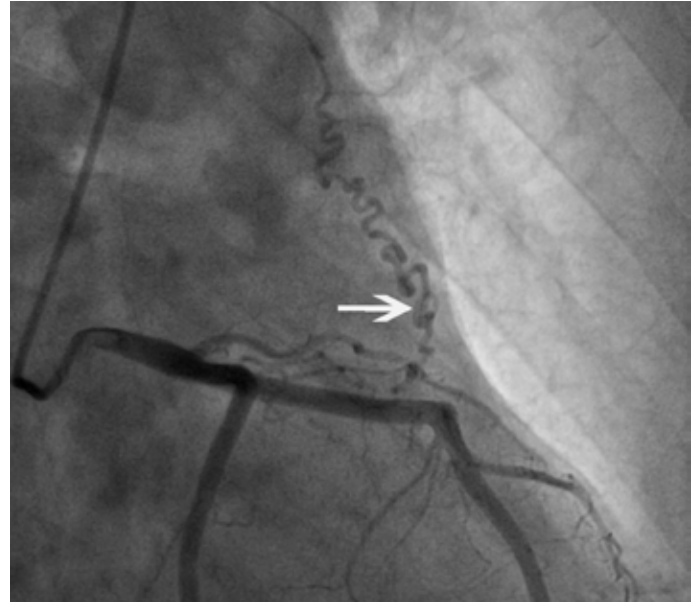


Figure 3. Selective coronary angiography at right anterior oblique caudal view shows a fistula (arrow) originated from mid portion of left anterior descending coronary artery to pulmonary vessels



Figure 4. Coronary angiography views: Two fistulas originated from right coronary artery (RCA) at left anterior oblique views. One of them originates from conus branch of RCA (black arrows), other arises from posterolateral branch and continues as a fistula to form a mesh of small collaterals which opacify the pulmonary artery branches (white arrow)

ing from a part posterolateral branch and continued to be an extension of this artery to form a mesh of small collaterals, which opacified the pulmonary artery branches (Video 1. See corresponding video/movie images at www.anakarder.com). After PEA, he was asymptomatic and pulmonary hypertension relieved. These fistulas may be considered as collaterals to perfuse the occluded or narrowed pulmonary arteries.

Video 1: Right coronary angiogram at AP cranial view demonstrated dual coronary artery fistulas originating from the conus branch and posterolateral branch of RCA and parallel running along lung territory with multiple drainage sites

AP - antero-posterior, RCA - right coronary artery

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Broken guidewire during primary percutaneous coronary intervention

Primer perkütanöz koroner girişim sırasında kopan kılavuz tel

A 68-year-old female patient was admitted to emergency room with acute anterior myocardial infarction. Her coronary angiography revealed

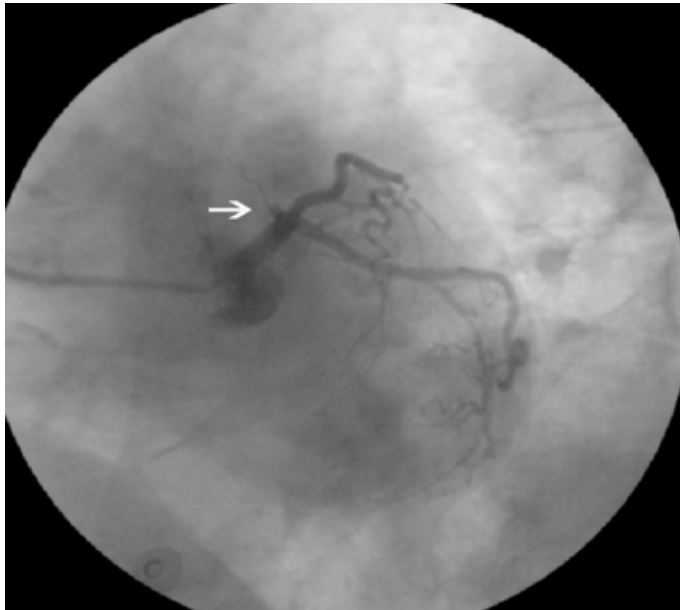


Figure 1. The left caudal coronary angiographic image shows totally occluded left anterior descending coronary artery (white arrow)

an acute total occlusion in the ostial segment of the left anterior descending coronary artery (LAD) (Fig. 1). The lesion was successfully crossed with a floppy guidewire (Fig. 2) and then predilated with balloon. Because of the close proximity of the lesion to the left main coronary artery (LMCA), a second guidewire was tried to send to the left circumflex artery (CX). The tip of the guidewire became curved while trying to pass the CX. Then it was thought to change the guidewire with another one. The tip of the second guidewire was broken inside the guiding catheter while pulling back but it was not understood during the procedure. Then another guidewire was passed to CX. A bare metal stent was sent to the lesion in LAD. When the stent arrived to the lesion area, the broken tip of the guidewire was seen at the end of the stent as a ring and entrapped over the culprit lesion (Fig. 3). The stent was crossed within



Figure 2. The totally occluded lesion of the left anterior descending coronary artery was successfully crossed with a floppy guidewire

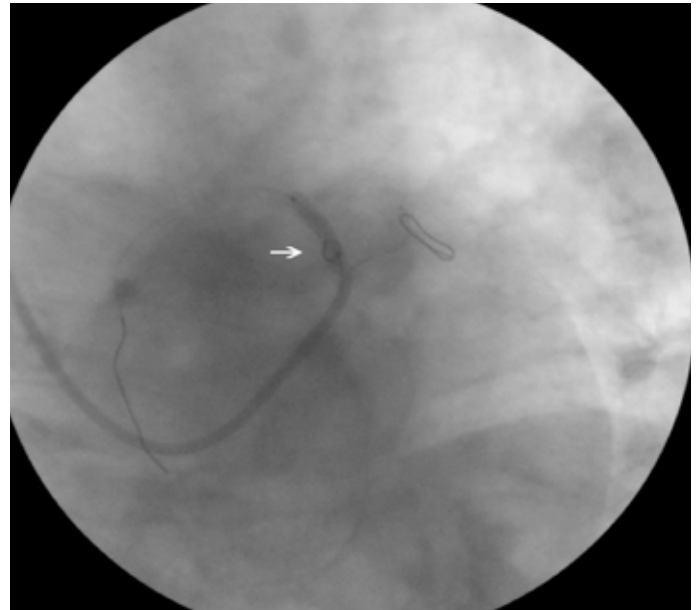


Figure 3. Coronary angiography view of a broken part of the floppy guidewire entrapped at the lesion site as a ring (white arrow)