

Successful Percutaneous Closure of Coronary-Pulmonary Fistula with Coil Embolization

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ABSTRACT

Congenital coronary-pulmonary artery fistula is a rare anomaly. Here we report a case of a coronary-pulmonary artery fistula connecting the right coronary artery to the main pulmonary artery, which was successfully treated with coil embolization

Key Words: Coronary-pulmonary fistula, coil embolization

ÖZET

Koil Embolizasyon ile Başarılı Koroner-Pulmoner Fistül Kapatılması

Konjenital koroner-pulmoner arter fistülü nadir görülen bir anomalidir. Bu yazıda, sağ koroner arteri ana pulmoner artere bağlayan koroner-pulmoner arter fistülünün coil embolizasyon yöntemi ile başarılı bir şekilde kapatılması sunuldu

Anahtar Kelimeler: Koroner pulmoner fistül, coil embolizasyon

CASE REPORT

Congenital coronary-pulmonary artery fistula is a rare anomaly. Here we report a case of a coronary-pulmonary artery fistula connecting the right coronary artery to the main pulmonary artery, which was successfully treated with coil embolization.

A 65-year-old woman was admitted to our institution having exercise dyspnea and substernal chest pain for 3 months. She had no history of cardiac disease or trauma and her physical examination was normal. The 12-lead electrocardiogram was normal. The exercise treadmill stress test showed ST depression of 1.5 mm in leads V3-6. In the light of clinical, electrocardiographic, and echocardiographic findings, the patient underwent cardiac catheterization. Selective coronary angiography showed a large coronary-pulmonary artery fistula connecting the right coronary artery to the main pulmonary artery (Figure 1). A standard 8 F guiding catheter was inserted into the left coronary artery. A floppy guidewire was placed into the fistula and a microcatheter (RapidTransit; Cordis, Miami, FL; USA) was advanced over the guidewire. The guidewire was withdrawn and a 4x30 mm mini-complex DCS Orbit detachable coil (Cordis, USA) was placed into the proximal part of the fistula. The occlusion was suboptimal on the 5th-minute control angiography (Figure 2), so an additional coil was placed in the distal part of the fistula. The fistula was closed successfully and post procedural angiography showed no residual shunting (Figure 3). The patient was discharged without any complication.

Percutaneous treatment represents an alternative to surgery and may be offered as a relatively low-risk procedure. The choice between surgical and percutaneous treatment must take into account clinical and anatomical considerations.

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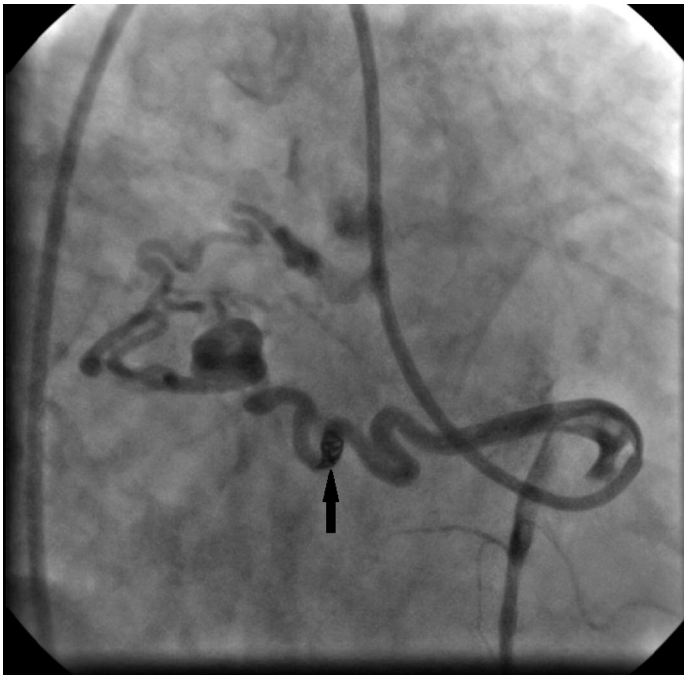


Figure 1: Coronary angiography demonstrates a large coronary arteriovenous fistula (arrows) originating from the proximal right coronary artery (RCA) and draining into the main pulmonary artery (PA).

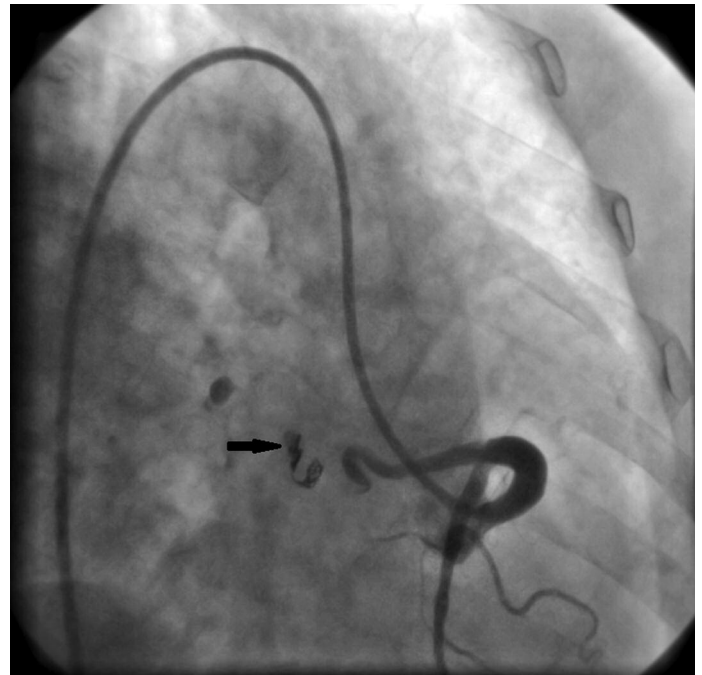


Figure 3: Following the second coil (arrow) embolization to the proximal part, the fistula completely disappeared.

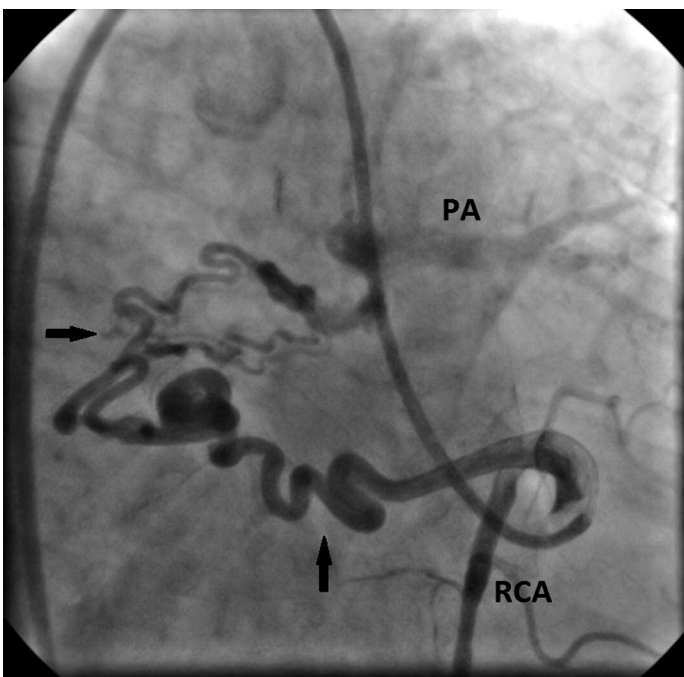


Figure 2: The same angiographic view showing incomplete occlusion of the fistula after coil (arrow) placement to the proximal part.