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IMAGES IN CARDIOLOGY

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Percutaneous treatment of trisaccular coronary aneurysm with coil-embolisation

A 49-year-old woman underwent cardiac evaluation because of severe chest pain and diaphoresis. Physical examination revealed a regular heart rate of 64 beats/min and a blood pressure of 60/30 mm Hg. Echocardiography and computed tomography (CT) of the patient's chest identified moderate amounts of pericardial effusion and the round mass as a large aneurysm of the coronary artery (panel A). An emergency pericardiocentesis was performed immediately to alleviate the haemodynamic

derangement. To delineate the size and location of the aneurysm, coronary angiography was performed (panel B). This revealed that the coronary artery fistula originated from the proximal left anterior descending artery, and was connected to the trisaccular aneurysm draining into the pulmonary artery. The aneurysm had a calcified wall and also contained swirling contrast with laminated thrombus.

Using the guidewire, the Guglielmi Detachable Coil (GDC, Hemostasis) was advanced and deployed into the first,

proximal aneurysm. Then, six additional GDCs had to be placed and the flow of the coronary artery fistula was successfully closed.

After the coil embolisation, a follow-up angiogram of the fistula with aneurysm was obtained one week later. This showed successful obliteration of the left anterior descending artery fistula with aneurysm.

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Computed tomographic scan showing pericardial effusion and a large aneurysm containing low density material-like thrombus.

Left: Coronary angiography shows the coronary-to-pulmonary fistula from the proximal left anterior descending coronary artery with a large trisaccular aneurysm. Right: Repeat angiography shows the coil embolisation and complete sealing of the aneurysm.