

## IMAGE FOCUS

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## Communication between coronary aneurysmal malformations and the left atrium

Antonio Auriti<sup>1\*</sup>, Lanfranco Antonini<sup>2</sup>, Christian Pristipino<sup>3</sup>, Enrico Di Lella<sup>4</sup>, and Ciro Campanella<sup>5</sup>

<sup>1</sup>Department of Cardiovascular Diseases, Clinical Advanced Echocardiography Lab, S. Filippo Neri Hospital, Via Martinotti 20, Rome 00135, Italy; <sup>2</sup>Department of Cardiovascular Diseases, Clinical Cardiology, S. Filippo Neri Hospital, Rome, Italy; <sup>3</sup>Department of Cardiovascular Diseases, Coronary Interventions Unit, S. Filippo Neri Hospital, Rome, Italy;

<sup>4</sup>Department of Radiology, S. Filippo Neri Hospital, Rome, Italy; and <sup>5</sup>Department of Cardiovascular Diseases, Division of Cardiosurgery, S. Filippo Neri Hospital, Rome, Italy

\* Corresponding author. Tel: +39 0633062505; Fax: +39 0633062489, Email: a.auriti@sanfilipponei.roma.it

A 65-year-old man presented in our hospital complaining of continuous chest discomfort and massive peripheral oedema. Past medical history was negative for heart diseases. Transthoracic echocardiography (TTE) revealed a septum apparently dividing the left atrium longitudinally into two chambers connected by a small opening. An abnormal continuous flow, through the abnormal septum, crossing the whole atrium, was directed towards the right pulmonary veins (*Panel A*; Supplementary data online, *Video S1*).

The transoesophageal echocardiography (TEE) confirmed the presence of a partition of the left atrium (*Panel B*), but no connections between pulmonary veins and the lateral chamber.

Coronary arteriography (*Panel C*; Supplementary data online, *Video S2*) and coronary computed tomography (CT) (*Panel D*) showed a complex coronary malformation with cirroid abnormal vessels and with a big aneurysm, merging with the left atrium, formed by the left circumflex artery (LCx) and a superior abnormal branch of the right coronary artery (RCA).

A cardiac CT scan showed a thick pericardium. Equal diastolic pressures (19 mmHg) in the right and left chambers were found at catheterization indicating constriction. This was the reason for the presenting symptoms of peripheral oedema.

The patient was referred for pericardiectomy to the surgeon and went, throughout the procedure, without any problem. The surgical procedure consisted in removal of the pericardium from phrenic to phrenic with a good immediate result.

*Panel A*. TTE: an abnormal continuous flow in the left atrium coming from a lateral chamber (LC) going towards the right pulmonary veins.

*Panel B*. TEE showing a chamber on the left part of the left atrium. A: coronary aneurysm.

*Panel C*. Right coronary arteriography demonstrating a cirroid coronary artery with an abnormal superior branch. *Panel D*. Coronary CT: coronary computed tomography; RCA: right coronary artery; AN: aneurysm formed by LCx and RCA.

Supplementary data are available at *European Heart Journal – Cardiovascular Imaging* online.

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