

## IMAGE

## Imaging techniques for diagnosing a giant coronary artery fistula

Fistule coronaire géante, intérêt respectif des examens d'imagerie

Philippe Garçon<sup>a,\*</sup>, Claude Vaislic<sup>b</sup>, Saadi Mostapha<sup>c</sup>

<sup>a</sup> Service de cardiologie, hôpital Paris-Saint-Joseph, 185, avenue Losserand, 75014 Paris, France

<sup>b</sup> Service de chirurgie cardiaque, hôpital Paris-Saint-Joseph, 185, avenue Losserand, 75014 Paris, France

<sup>c</sup> Clinique Maison-Blanche, Vernouillet, France

Received 10 December 2007; received in revised form 25 April 2008; accepted 25 April 2008  
Available online 2 September 2008

### KEYWORDS

Coronary artery fistula;  
Multidetector computed tomography;  
Transesophageal echography

### MOTS CLÉS

Fistule coronaire ;  
Scanner cardiaque ;  
Échocardiographie transœsophagienne

A 72-year-old man presented with new onset heart failure. Chest radiography showed marked cardiomegaly and a dense structure contiguous with the left heart border (Fig. 1). Transthoracic echocardiography was unremarkable because of poor echogenicity. Transesophageal echocardiography (TEE) revealed a giant aneurysm located at the posterior side of the left ventricle, near the mitral annulus (Fig. 2). The enlarged circumflex artery flowed towards the left atrial appendage and fed the giant aneurysm. A provisional diagnosis of coronary fistula was made. Coronary angiography (Fig. 3) unequivocally established the diagnosis of a left coronary fistula. However, TEE and coronary angiography failed to determine the drainage site for the fistula.

To trace the drainage accurately, computed tomography (CT) angiography was performed, and showed a partially thrombosed giant aneurysm (14 × 9 cm in diameter), fed by the circumflex coronary artery. The site of drainage appeared to be the main coronary vein (Figs. 4 et 5).

Taking into consideration the size of the aneurysm and the heart failure, the patient was referred for surgery. The aneurysm was resected and the circumflex artery ligated, without coronary bypass because of the small size of the vessel bed (Figs. 6 et 7). The patient's postoperative course was unremarkable.

\* Corresponding author. Fax : +01 44 12 32 51.  
E-mail address: [pgarcon@wanadoo.fr](mailto:pgarcon@wanadoo.fr) (P. Garçon).

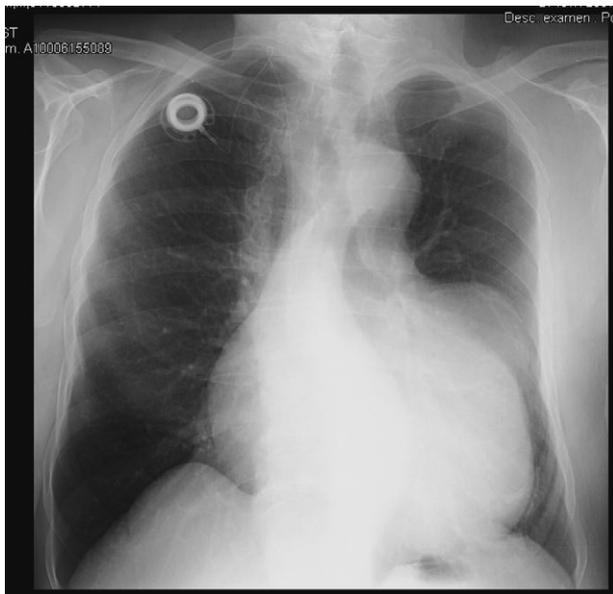


Figure 1.

Coronary arteriovenous fistula with a giant aneurysm is a rare finding. Many complications can occur, such as congestive heart failure, myocardial infarction, arrhythmias, endocarditis, and sudden death by rupture. In this patient, multislice CT scanning appeared to be a better tool than coronary angiography or echocardiography for precise characterization of the fistula (dilated feeder vessel, drainage site, and adjacent structures).

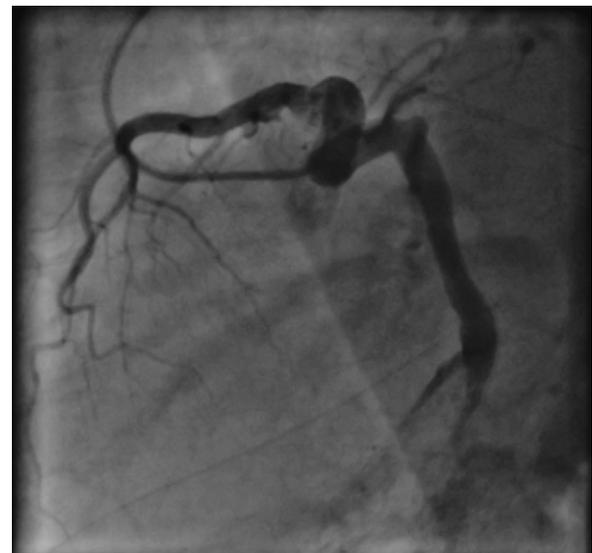


Figure 3.

### Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at [doi:10.1016/j.acvd.2008.04.009](https://doi.org/10.1016/j.acvd.2008.04.009).

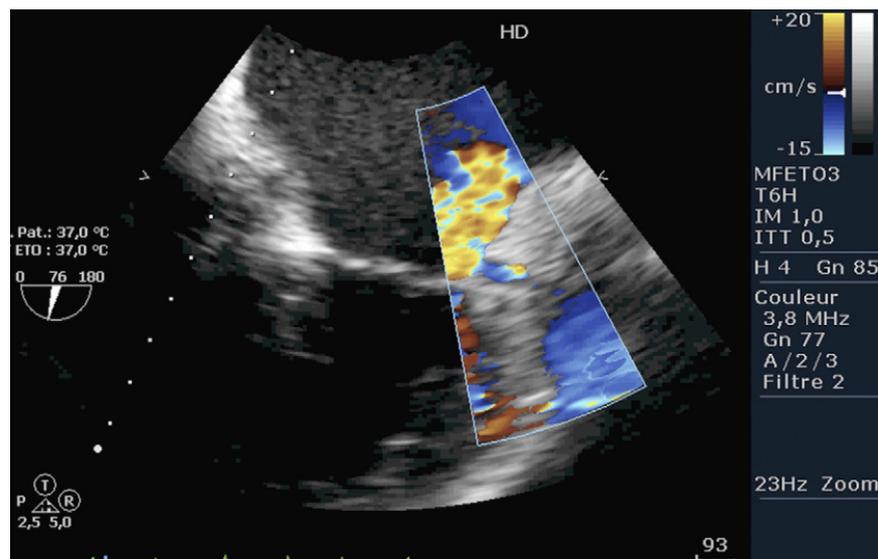


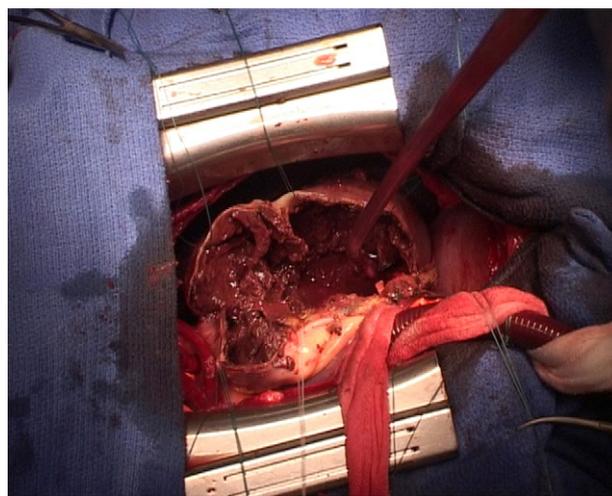
Figure 2.



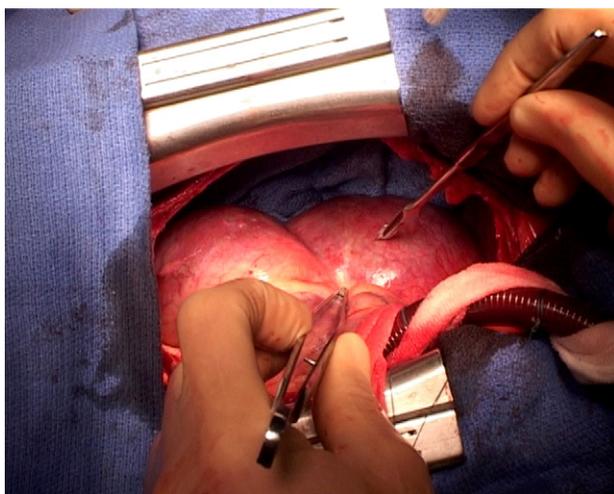
**Figure 4.** (Image due à l'amabilité du Dr JF Paul, centre chirurgical Marie-Lannelongue, Le Plessy Robinson).



**Figure 5.** (Image due à l'amabilité du Dr JF Paul, centre chirurgical Marie-Lannelongue, Le Plessy Robinson).



**Figure 7.**



**Figure 6.**