



## Editorial

## Coronary artery fistulous communication

## KEYWORDS

Coronary artery fistula communication;  
ECG-gated multi-detector computed tomography;  
Surgical treatment

A coronary artery fistula communication is an abnormal communication that arises from a coronary artery and terminates in a cardiac chamber. Coronary artery fistula communication is rare, with a reported incidence of 0.02–2.1% in angiographic studies and varies by ethnicity, with the highest reported incidence in the Japanese population [1,2].

Fistulas between the circumflex coronary artery and the coronary sinus are unusual. Only few treated patients have been reported to date [3,4]. Fistulas can be closed with a variety of percutaneous transcatheter closure techniques, including the use of detachable balloons, platinum microcoils, or steel coils [5]. Surgery is clearly indicated for patients with a significant shunt and a large aneurysm. The surgical technique should meet two objectives: the interruption of the fistula and the prevention of future complications related to the aneurysm, without compromising normal coronary blood flow [3,6–8].

There remains no standard of management or clinical algorithm for this rare pathology, although diagnosis and treatment may stand to benefit from improved cardiac imaging modalities. Conventional coronary angiography is a commonly used diagnostic modality for tracing the anatomic course of giant coronary arteriovenous fistulas. However coronary angiography alone cannot define the complex anatomy of the fistula. Multi-detector computed tomography (MDCT) may provide superior visualization of aneurysmal coronary fistulas and their anatomic relationship to the adjacent structures and could help guide surgical or endovascular treatment strategies [9–11]. Watanabe and colleagues [12] have very elegantly demonstrated that electrocardiogram-gated 64-MDCT is a helpful modality for the diagnosis of a coronary artery fistula communication.

MDCT angiography is an important tool for defining the complex anatomy of giant coronary arteriovenous fistulas and their relation to adjacent structures in anticipation of surgical treatment.

A coronary artery fistula communication is a rare disorder, but various forms and clinical conditions have been reported. The progress of the diagnostic method is important for precise therapeutic instruction.

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