Internal Medicine
The Japanese Society of Internal Medicine
doi: 10.2169/internalmedicine.8843-17
Intern Med 56: 2535-2536, 2017
http://internmed.jp

【 PICTURES IN CLINICAL MEDICINE 】

Multiple Left and Right Coronary Artery-left Ventricular Fistulas

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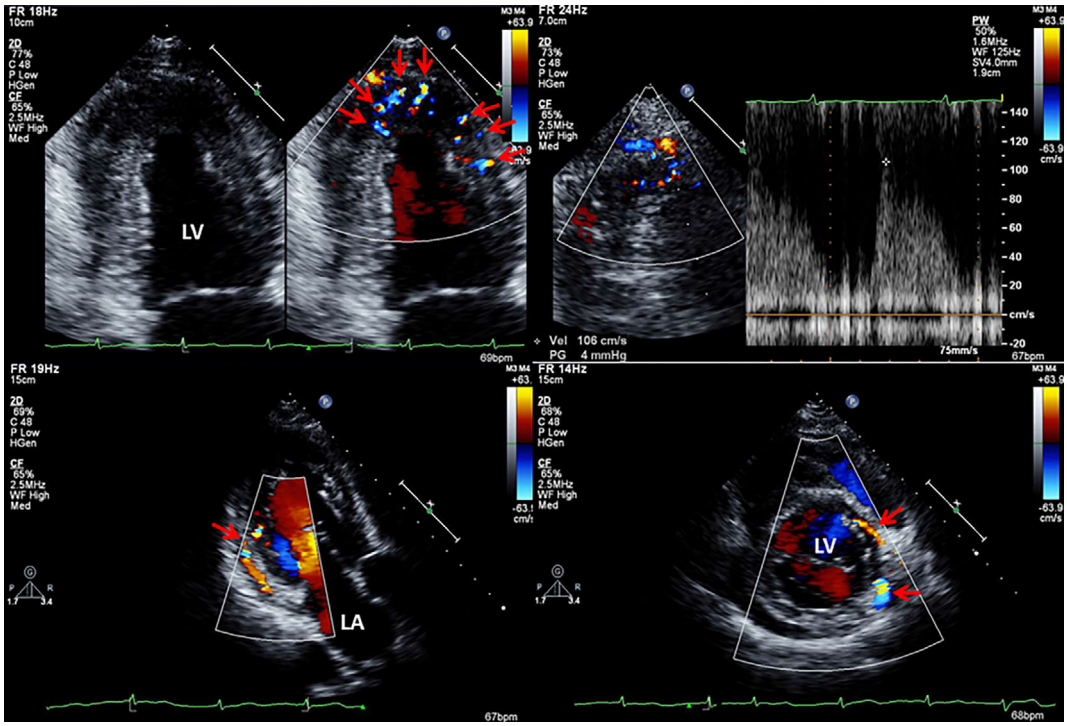
Key words: coronary artery fistula, coronary steal phenomenon, multimodality imaging

(Intern Med 56: 2535-2536, 2017)
(DOI: 10.2169/internalmedicine.8843-17)



Picture 1.

A 66-year-old man was referred to our hospital due to a heart murmur. A continuous grade II/VI murmur, louder in diastole, was audible at the Erb and the apex area. Color Doppler imaging of echocardiography revealed multiple abnormal flow patterns during the diastolic phase at the mid-left ventricle and apex (Picture 1, arrows). Coronary computed tomography detected multiple left coronary artery-left ventricular fistulas (Picture 2). Coronary angiography showed both coronary artery-left ventricular fistulas, resulting in entire left ventricle contrast opacification (Picture 3). The patient had no symptom in his daily life, but a treadmill exercise test and intravenous infusion of adenosine triphosphate (ATP) were interrupted due to chest pain and borderline electrocardiographic findings for ischemia (Picture 4), suggesting coronary steal phenomenon (1). In particular, ATP caused severe chest symptoms, probably due to the dilatation of the coronary vasculature, resulting in a reduction in the intracoronary diastolic perfusion pressure and an increase in the leakage to the left ventricle, as well as nitrate therapy (2).

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Received: January 10, 2017; Accepted: February 2, 2017; Advance Publication by J-STAGE: August 21, 2017
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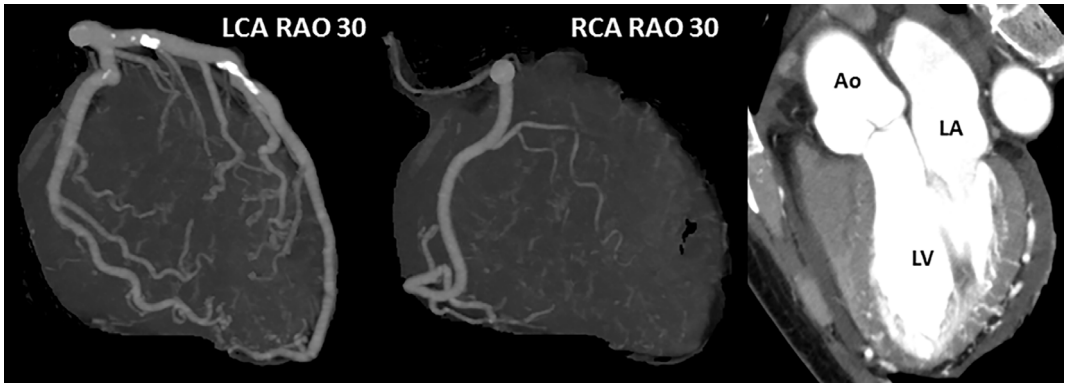
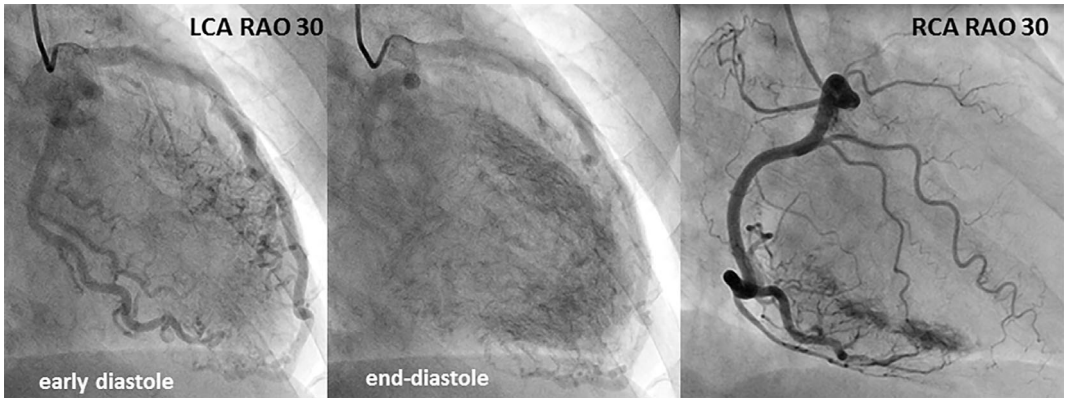
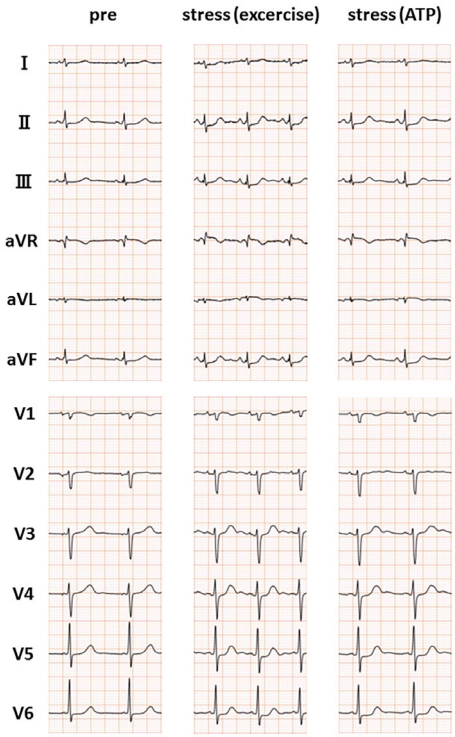


Picture 2.



Picture 3.



Picture 4.

The authors state that they have no Conflict of Interest (COI).

References

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