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A case of angina pectoris with concomitant fistulization of the diagonal and right coronary artery with the coronary sinus

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A 42-year-old male with complaints of chest pain worsening by exercise and fatigue had a blood pressure of 125/70 mm Hg and a pulse rate of 86/minute. A continuous 2/6 murmur was detected in the right and left parasternal segments. Electrocardiographic and telecardiographic examinations were normal. Echocardiography revealed no abnormality and other laboratory results were normal. He had a history of cigarette smoking of 15 pack-years. Coronary angiography showed that the LAD was reduced in diameter after the first diagonal branch, and septal branches were decreased both in number and caliper. The first diagonal branch drained to the coronary sinus (CS). The coronary sinus was dilated and the circumflex artery (CX) terminated early and was rudimentary (Figures 1, 2, 3). Right coronary angiography showed tapering of the right coronary artery (RCA) after the acute margin branch while the distal segment dilated and drained to the same coronary sinus along with DI (Figure 4).

The incidence of coronary artery fistulae is quite low (0.1-0.2%).[1] Electrocardiography and telecardiography have limited benefit in distinctive diagnosis.[2] Coronary fistulae vary greatly morphologically and manifest with widely differing clinical presentations, most often respiratory difficulty, congestive heart failure, and anginal complaints.[3] Rarely, it may precipitate myocardial infarction.[4] Coronary angiography of our patient revealed that non-fistulized coronary arteries were markedly reduced both in caliper and number of side branches. Surgical or coil embolization is recommended for symptomatic cases or for patients with a hemodynamically major shunt.[5,6]

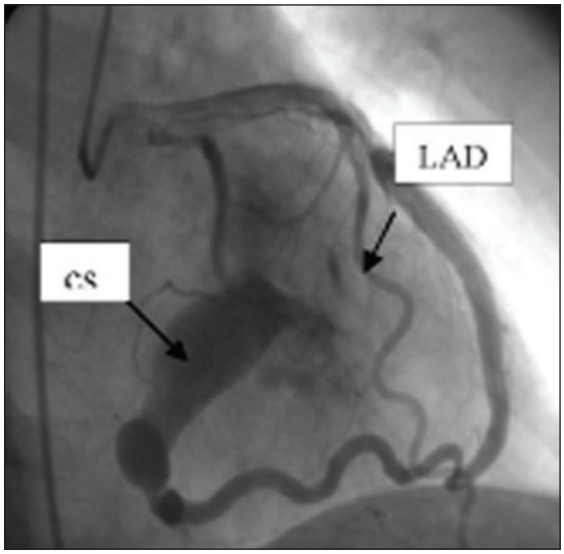

Figure 1. Coronary angiography showing that the left anterior descending (LAD) artery was reduced in diameter after the first diagonal branch (DI), the first diagonal branch drained to the coronary sinus (CS), and the coronary sinus was dilated.

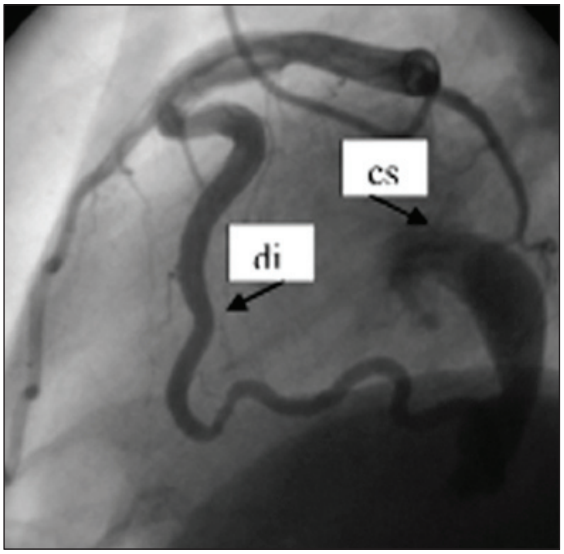

Figure 2. Coronary angiography showing the same features as Figure 1.

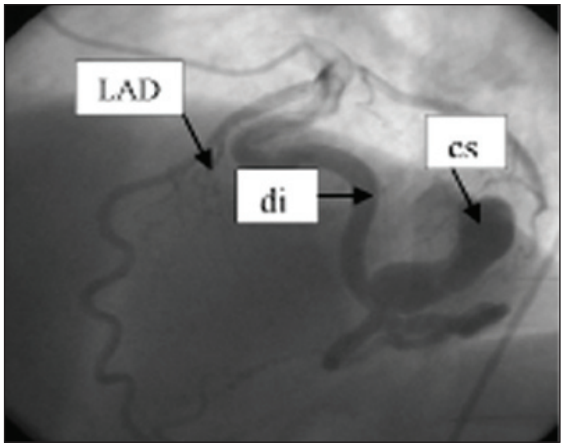

Figure 3. Coronary angiography showing the same features as Figure 1.

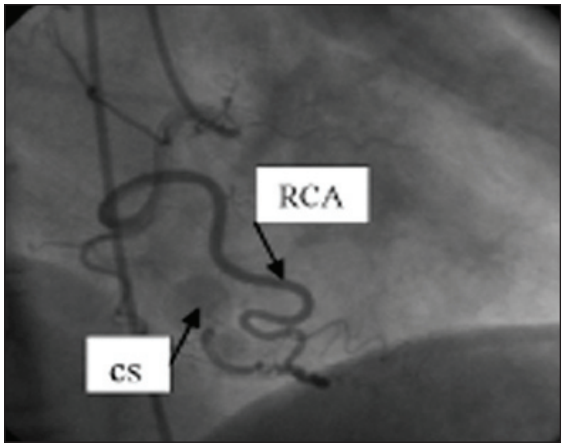

Figure 4. Right coronary angiography showing tapering of the right coronary artery (RCA) after the acute margin branch while the distal segment was dilated and drained to the same coronary sinus along with DI.

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