

A case of unusual coronary-cameral fistula

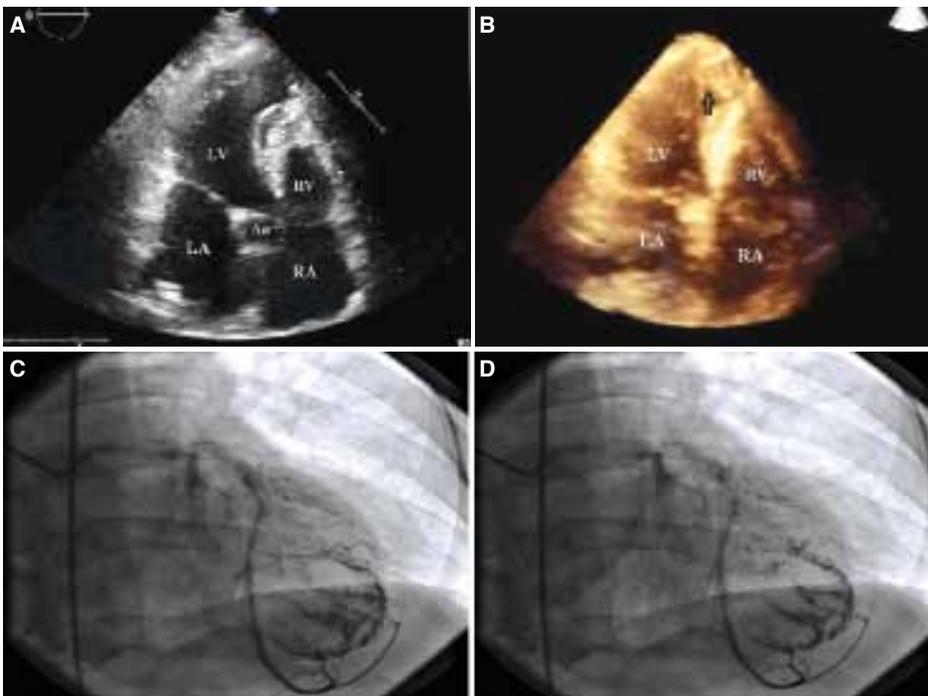
Olağandışı koroner kameral fistül olgusu

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A 65-year-old man with known hypertension and a prior history of coronary artery disease (anterior myocardial infarction with percutaneous transluminal coronary angioplasty (PTCA) and stent placement in the left anterior descending artery (LAD) 14 years prior) was admitted to the emergency department with symptoms of chest pain. Electrocardiography demonstrated pathologic Q waves in the V1-V6 leads. The serum biomarkers of myocardial injury were also elevated, with serum troponin I of 0.2 ng/dl (0-0.04 ng/dl). Two-dimensional transthoracic echocardiography (TTE) revealed the presence of left ventricular (LV) apical aneurysm and an ejection fraction of 40%. LV apical thrombus was also observed using real-time three-dimensional TTE (Figure A, B Video 1*). The patient underwent elective coronary angiography for the assessment of coronary artery disease subsequent

to a diagnosis of non-ST segment elevation myocardial infarction. Selective left coronary angiogram demonstrated absence of left main and separate but adjacent ostia of the LAD and left circumflex artery (Cx) from the left coronary aortic sinus of Valsalva and the presence of multiple fistulas in the LAD draining into the LV apical aneurysm (Figure C, D Video 2*). Non-stenotic atherosclerotic plaques in the Cx and right coronary arteries were also noted. Medical treatment with anti-ischemic drugs was scheduled for the patient. Case reports describing the emergence of cardiac fistula following myocardial infarction have been published previously and reveal a possible relation to adverse ventricular remodelling. To our best knowledge, the presence of a fistula connecting the coronary artery to a ventricular aneurysm is extremely rare. The observation of fistula drainage at the site of the ventricular aneurysm or infarction may suggest potential mechanisms that contribute to fistula formation. Erosion of the myocardium may expose microcapillaries of the subendocardium to the LV cavity, a process that could be expedited by improved blood flow following stent insertion.



Figures– (A) Two-dimensional (2D) and **(B)** real-time three-dimensional (3D) TTE view of the LV apical aneurysm and thrombus (arrow). Coronary angiogram obtained at cranial **(C)** left and **(D)** right anterior oblique projection showing multiple fistulas between the left anterior descending artery (LAD) and LV apical aneurysm. *Supplementary video file associated with this presentation can be found in the online version of the journal.