

A right coronary fistula simulating a connection between the right atrium and the aorta in a patient with an aortic paravalvular leak

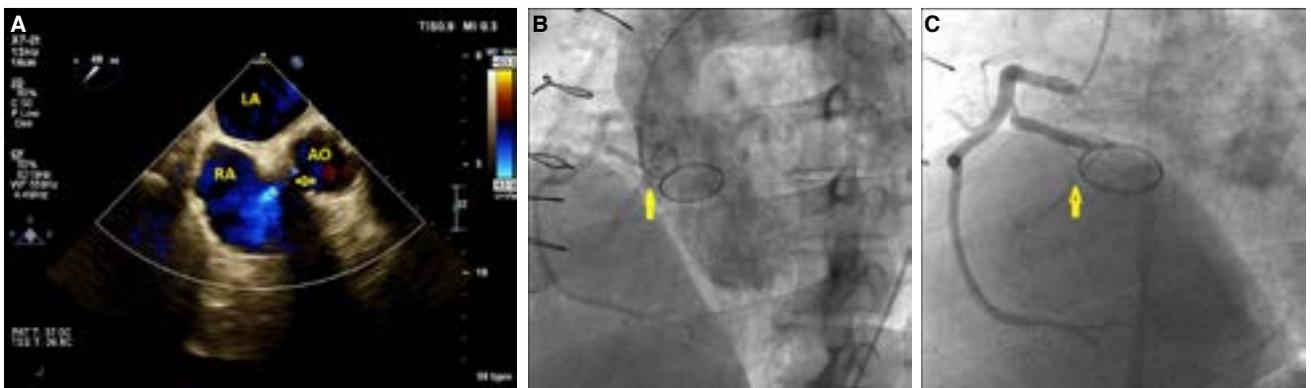
Aortik paravalvüler kaçak olan bir hastada sağ atriyumla aort arasında bağlantıyı andıran sağ koroner fistül

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A 39-year-old man with a history of aortic valve replacement 12 years ago and 2 surgical operations for the repair of aortic paravalvular leakage 4 years and 2 years earlier was referred to our echocardiography laboratory for further evaluation of the paravalvular leakage. He complained of dyspnea on exertion (New York Heart Association functional class II). Transthoracic echocardiography revealed severe left ventricular enlargement with mild systolic dysfunction (ejection fraction: 48%), a mechanical bileaflet prosthetic aortic valve with normal leaflet motion, and severe paravalvular leakage from from the anteromedial region of aortic valve sewing ring. Transesophageal echocardiography demonstrated a paravalvular leak and continuous flow between the noncoronary sinus of the aorta and the right atrium,

suggestive of a fistula between these 2 chambers. The initial aortic root injection (in the left anterior oblique view) (Fig. A, Video 1) appeared to support the presence of this fistula; however, the selective right coronary injection revealed (Fig. B) that the fistula was between one of the branches of the right coronary artery and the right atrium (Fig. C). Attempts to close the paravalvular leakage site with a device proved unsuccessful, so the patient was referred for surgical repair of the leak. A review of the patient's signs, symptoms, and medical documents during these years was not indicative of infectious endocarditis, and the significant paravalvular leakage was detected in the early post-operative period. In addition to the congenital cause, repeated surgery may have been a possible cause. It appears that in the evaluation of a patient with a fistula between the cardiac chambers, multimodality imaging may be integral to a meticulous assessment of the patient and may modify the cardiologist's decision-making process.



Figures– (A) Transesophageal echocardiography demonstrating a continuous flow between the aortic root and the right atrium simulating a fistula between these 2 chambers. AO: Aorta; LA: Left atrium; RA: Right atrium. **(B)** Image of the initial aortic root injection suggesting a connection between the aorta and the right atrium. **(C)** The selective right coronary injection at left anterior oblique view demonstrates a fistula between one of the branches of the right coronary artery and the right atrium.

*Supplementary video files associated with this presentation can be found in the online version of the journal.