

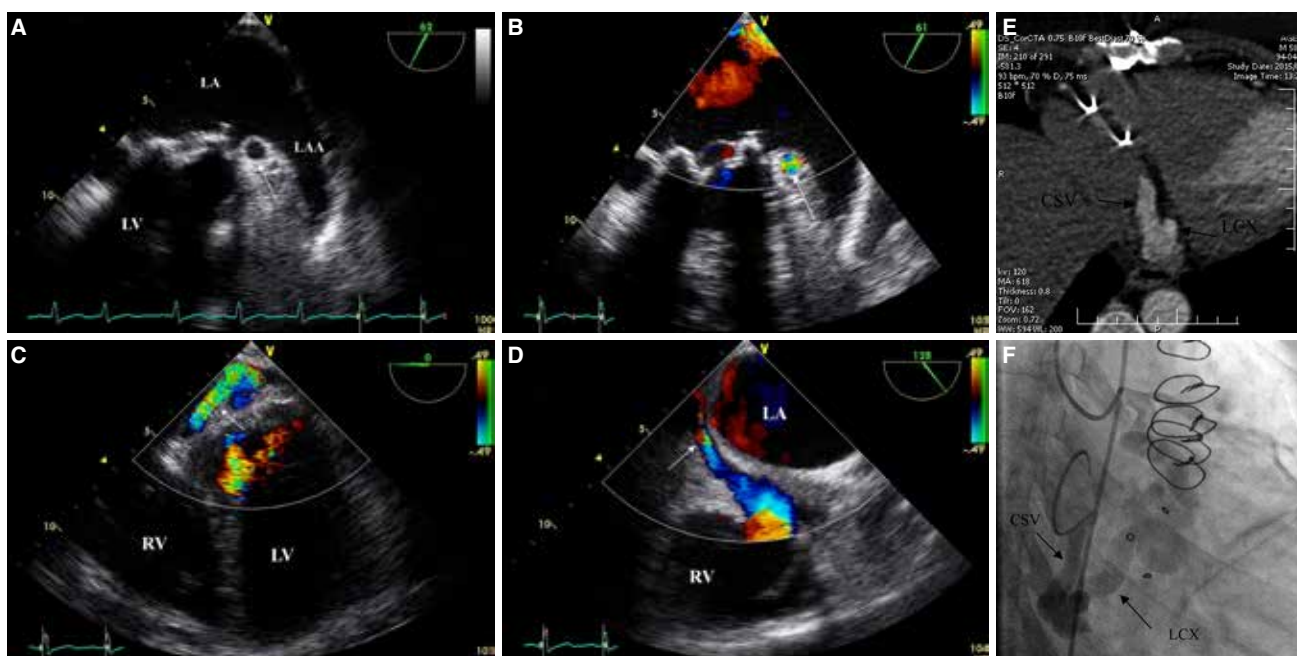
## Left circumflex artery and coronary sinus vein connection detected after mitral-valve replacement

### Mitral kapak değişiminden sonra saptanan sol sirkumfleks arter ve koroner sinüs ven bağlantısı

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A 37-year-old woman was referred to echocardiography for evaluation of mitral valve paravalvular leakage. She had undergone tricuspid-valve repair and mitral-valve replacement with a bioprosthetic valve 7 years earlier due to rheumatic heart disease. Selective coronary angiography had not been performed prior to cardiac surgery. Her chief complaint was recent, gradual occurrence of dyspnea on exertion (New York Heart Association class II) of several months' duration. Previous transthoracic echocardiography had demonstrated moderate paravalvular leakage from the posterior side of the sewn ring and moderate aortic regurgitation.

Transesophageal echocardiography revealed a normally functioning bioprosthetic mitral valve with no paravalvular leakage, but the left circumflex artery (LCx) was dilated with a continuous, turbulent flow, which was also present in the distal portion of the coronary sinus vein. Connection between the LCx and the coronary sinus vein was suspected and subsequently confirmed by coronary computed tomography angiography. Selective coronary angiography showed a dilated, tortuous LCx and its connection to the coronary sinus vein. The patient was referred for the surgical closure of this connection. Connection between the LCx and the coronary sinus vein can be congenital or iatrogenic; it should, therefore, be considered in the evaluation of patients (Figures).



**Figures–** (A) Dilated left circumflex artery, (B) continuous, turbulent flow in dilated left circumflex artery on transesophageal echocardiography. (C, D) Continuous, turbulent flow in the coronary sinus vein on transesophageal echocardiography (0° and 128°). (E) Dilated left circumflex artery and its connection to the coronary sinus vein on coronary computed tomography angiography. (F) Selective coronary artery angiography, showing a dilated, tortuous left circumflex artery and its connection to the coronary sinus vein. LA: Left atrium; LAA: Left atrial appendage; LV: Left ventricle; RV: Right ventricle; LCx: Left circumflex artery; CSV: Coronary sinus vein; CSV: Coronary sinus vein. \*Supplementary video files associated with this presentation can be found in the online version of the journal.