Absent left main trunk in a patient with subaortic membrane detected by three-dimensional echocardiography

Sait Demirkol1*, Sevket Balta1, Zekeriya Arslan2, Ugur Kucuk1, and Atila Iyisoy1

1Department of Cardiology, Gulhane Military Medical Academy, School of Medicine, Tevfik Saglam St., 06018, Estlik-Ankara, Turkey and 2Department of Cardiology, Gelibolu Hospital, Canakkale, Turkey

*Corresponding author. Tel: +90 312 3044281; fax: +90 312 3044250. Email: saitdemirkol@yahoo.com

A 23-year-old male patient was admitted to our outpatient clinic with a shortness of breath. His physical examination was unremarkable except for aortic 3/6 systolic murmur. The 12-lead electrocardiogram showed a sinus rhythm. Two-dimensional transthoracic echocardiography demonstrated a subaortic stenosis with an increased gradient (Panel A). The two-dimensional transesophageal echocardiography long-axis view showed a discrete membrane at the left ventricular outflow tract (Figure 1 and see Supplementary data online, Video 1B, asterisk). The three-dimensional transesophageal echocardiography en-face view after manual cropping of a full-volume acquisition revealed a discrete membrane and separate origins of the left anterior descending and left circumflex coronary artery from the left sinus of Valsalva (Figure 1 and see Supplementary data online, Video 1C, arrows). The coronary angiogram confirmed separate origins of the left anterior descending and left circumflex coronary artery (Figure 1D, arrows).

Most coronary anomalies do not result in signs, symptoms, or complications, and usually are discovered as incidental findings at the time of catheterization. Three-dimensional imaging of the coronary arteries by echocardiography is feasible and possible. Three-dimensional echocardiography can be used as a new option for the non-invasive imaging of coronary arteries. LA, left atrium; LV, left ventricle; asterisk, discrete membrane.

Supplementary data are available at European Heart Journal – Cardiovascular Imaging online.

Reference