

Spontaneous aortic root rupture during pregnancy

Gebelik sırasında bir hastada spontan aort kökü rüptürü

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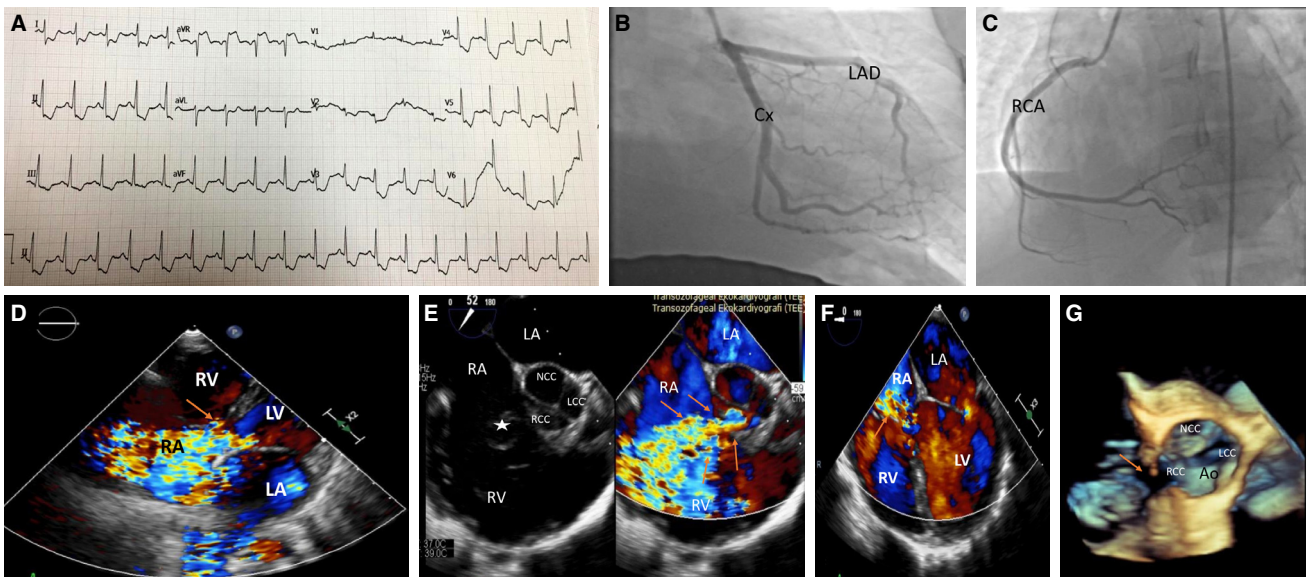
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A 22-year-old female who was in the 26th week of pregnancy was admitted to the emergency service with signs and symptoms of acute coronary syndrome (ACS). Electrocardiography indicated ST-segment elevation in the aVR lead with multi-lead ST depression and sinus tachycardia with a heart rate

of 105 bpm (Fig. A). Urgent coronary angiography revealed normal coronary arteries (Fig. B, C). Transthoracic echocardiography showed a perforation of the right coronary sinus of Valsalva (rSV), and color flow Doppler identified continuous flow from the aorta to the right atrium (RA), trivial aortic regurgitation, and mild mitral regurgitation (Fig. D). A transesophageal echocardiogram confirmed the presence of a thin-

wall aneurysmal pocket fluctuating from the right coronary cusp (RCC) into the RA, but diagnosis of a bicuspid aortic valve could not be made clearly due to the rupture. In addition, color flow Doppler identified continuous flow from the RCC to the RA (Fig. E, F; Video 1, 2^{*}). Three-dimensional imaging was used to acquire images of the aortic valve and to better visualize the fistula tract to the rSV (Fig. G; Video 3^{*}). Infective endocarditis was evaluated and excluded by an infectious diseases specialist. The patient successfully underwent aortic root repair and aortic valve replacement, but the pregnancy was terminated. Pregnancy involves an increased risk of aortic dissection and rupture, as it causes progressive, estrogen-mediated, structural weakening (elastin irregularity) of the aortic media. In this case, these pathological changes may be a cause of spontaneous rupture of the aortic root. Echocardiography is a mandatory imaging modality prior to coronary angiography for both mechanical complications and the exclusion of aortic pathologies in patients with acute ACS.



Figures– (A) Electrocardiography shows ST-segment elevation in the aVR lead with multi-lead ST depression and sinus tachycardia. (B, C) Coronary angiography indicates normal right, left anterior descending and left circumflex coronary arteries. (D) Color flow Doppler illustrates continuous flow from the aorta to the right atrium. (E, F) Transesophageal echocardiography (TEE) demonstrates the presence of a thin-wall aneurysmal pocket fluctuating from the right coronary cusp into the right atrium. (G) Three-dimensional TEE indicates abnormal connection between the right coronary sinus and the right atrium.

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