

Coronary embolism in a patient with massive left atrial thrombus and mechanical valve thrombus: hybrid treatment with surgery and percutaneous intervention

Dev sol atriyal trombüs ve mekanik kapak trombozlu bir hastada koroner emboli: Cerrahi ve perkütan girişim ile hibrid tedavi

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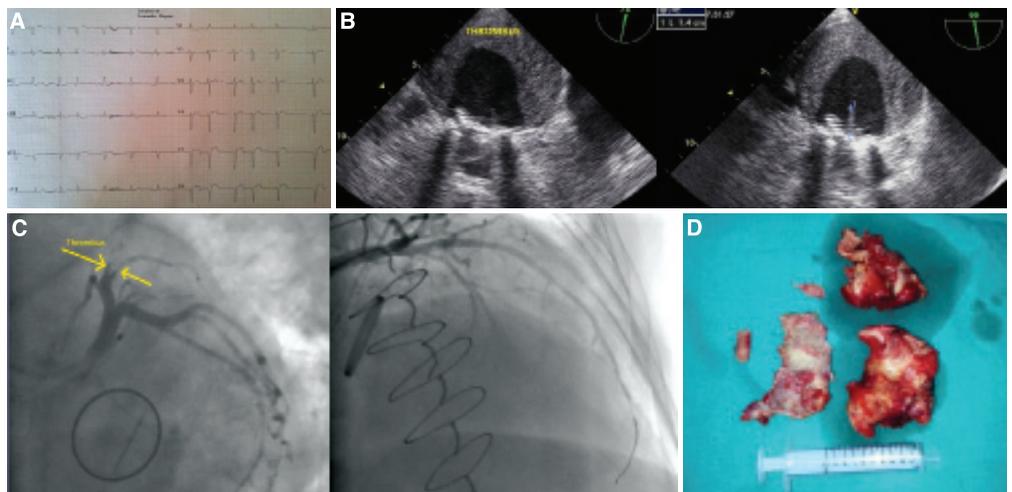
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A 67-year-old female was admitted to the emergency department with chest pain for the last 24 hours. She had a history of rheumatic mitral stenosis and had received a mechanical mitral valve (24-mm bi-leaflet St. Jude valve) three years ago. She had been inadequately anti-coagulated for the last two months. At the time of

of chest pain and ECG findings, she was diagnosed as subacute anterior myocardial infarction and underwent coronary angiography, which revealed total occlusion of the proximal segment of the left anterior descending artery. The patient was anticoagulated with unfractionated heparin. Lesion wiring and predilatation were done using 2.0x12 and 2.5x20 mm balloons. A 2.75x32 mm bare metal stent was implanted (Fig. C). Heparin was infused for 10 days with adjustment of activated partial thromboplastin time (aPTT) level to 50-70 seconds. Because the follow-up TEE showed no regression of the thrombus on the mechanical valve or of the left atrial thrombus, surgical thrombectomy was planned. Median sternotomy was performed and huge left atrial thrombus fragments (7.5x3 cm, 6x4 cm, 6.5x5 cm, 1.7x0.7 cm, and 1.5x0.7 cm) were excised without mechanical valve replacement (Fig. D). The patient was discharged with optimal anticoagulation. She was asymptomatic and had normal mechanical valve functions on TTE examination at the two-month follow-up.



presentation, her international normalized ratio (INR) was 1.02. The electrocardiogram (ECG) revealed atrial fibrillation with a heart rate of 130 beats per minute, right bundle branch block, and precordial ST segment elevation (Fig. A). Transthoracic echocardiography (TTE) revealed hypokinesis of the apex, apical and mid septal walls, with an ejection fraction of 40%, in normal range of mitral valve area of 2.3 cm²; the peak and mean transmitral gradients were 15 mmHg and 7 mmHg, respectively. Transesophageal echocardiography (TEE) showed up to 1.4 cm fibrillar thrombi on the mitral prosthetic valve and a huge thrombus completely filling the left atrial walls except for the mitral prosthetic valve line and extending to the right and left pulmonary vein ostia on the posterior wall and into the appendix (Fig. B, Video file 1*). Based on the symptom



Figures– (A) Initial electrocardiogram showing precordial ST-segment elevation in leads V3–V6, atrial fibrillation and right bundle branch block. (B) Transesophageal echocardiography (TEE) shows up to 1.4 cm fibrillar thrombi on the mitral prosthetic valve and a huge thrombus completely filling the left atrial walls except the mitral prosthetic valve line and extending to the right and left pulmonary vein ostia on the posterior wall and into the appendix. (C) (a) Emergency coronary angiograms showed total occlusion of the left anterior descending artery (left anterior oblique caudal view). (b) The final angiographic result after stent implantation shows no residual stenosis in the left anterior descending artery (left anterior oblique cranial view). (D) Left atrial thrombus fragments (7.5x3 cm, 6x4 cm, 6.5x5 cm, 1.7x0.7 cm, and 1.5x0.7 cm). *Supplementary video file associated with this presentation can be found in the online version of the journal.