

Ventricular Aneurysm Mimicking the Image of a Muscular Bridge in the Right Coronary Artery

Sağ Koroner Arterde Kas Köprüsü Görüntüsünü Taklit Eden Ventriküler Anevrizma

A 72-year-old woman was admitted with gradually worsening shortness of breath, inability to lie flat, and chest tightness lasting for three days. During the physical examination, she appeared restless and exhibited orthopnea. Fine crackles were noted in her lungs, extending to the bilateral middle zones. The cardiac examination revealed an S3 heart sound and a holosystolic 3-4/6 murmur at the apex. Her high-sensitivity troponin level was 1,605 ng/L, and N-terminal pro-brain natriuretic peptide (NT-proBNP) was 16,512 pg/mL. She had a history of acute coronary syndrome three months ago, during which a massive thrombus in the distal and posterolateral branches of the right coronary artery was detected. This event was followed up medically, as the lesion was not suitable for intervention (Figure 1).

The patient was admitted to the coronary intensive care unit with a diagnosis of decompensated heart failure and acute coronary syndrome. Her ejection fraction was 49%, and the left ventricular mid-basal inferior and posterior walls were hypokinetic. The inferobasal segment raised suspicion for an aneurysm. Coronary angiography showed normal coronary arteries, but there was a muscular bridge image in the posterolateral branches of the right coronary artery (Video 1). Transesophageal echocardiography revealed severe mitral regurgitation (Figure 2, Video 2) without chordal rupture. Computed tomography demonstrated a left ventricular aneurysm with a base of 50 mm and a depth of 30 mm in the left ventricular basal inferolateral segment, compressing the coronary arteries and

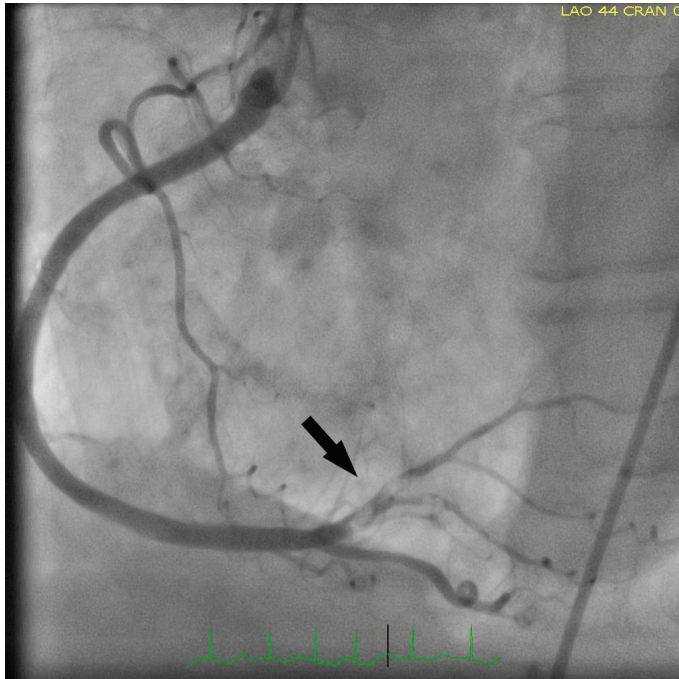


Figure 1. A massive thrombus in the distal and posterolateral branches of the right coronary artery.

CASE IMAGE OLGU GÖRÜNTÜSÜ

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Received: January 25, 2023

Accepted: March 14, 2023

Cite this article as: Akkuş ÖF, Demir M, Ustabasıoğlu FE, Altay S. Ventricular aneurysm mimicking the image of a muscular bridge in the right coronary artery. *Türk Kardiyol Dern Ars.* 2024;52(2):153-154.

DOI:10.5543/tkda.2023.94708



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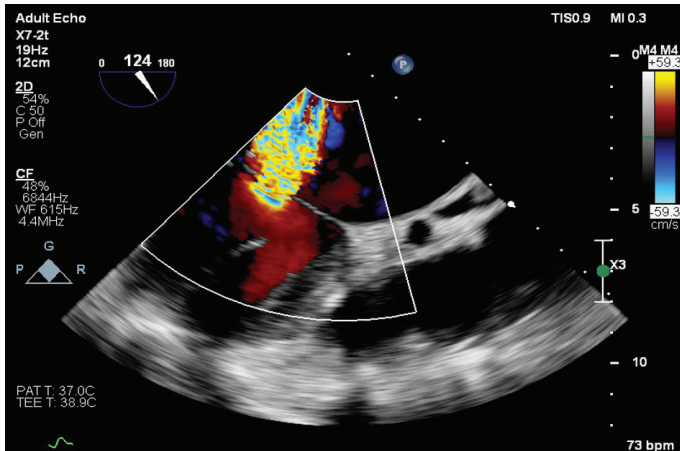


Figure 2. Transesophageal echocardiography demonstrating severe mitral regurgitation.

causing the bridge image (Figure 3). Mitral valve replacement was performed after the patient became clinically stable.

Myocardial bridges are formed by segments of epicardial coronary arteries coursing through myocardial tissue, most commonly observed in the left descending coronary artery. A bridge image in the right coronary artery is rare. If clinical conditions cannot be explained by a myocardial bridge, or the bridge image is located in an unusual place such as the right coronary artery, multimodality imaging should be considered to identify possible associated conditions.

Informed Consent: Informed consent was obtained from the patient for the publication of the case image and accompanying images.

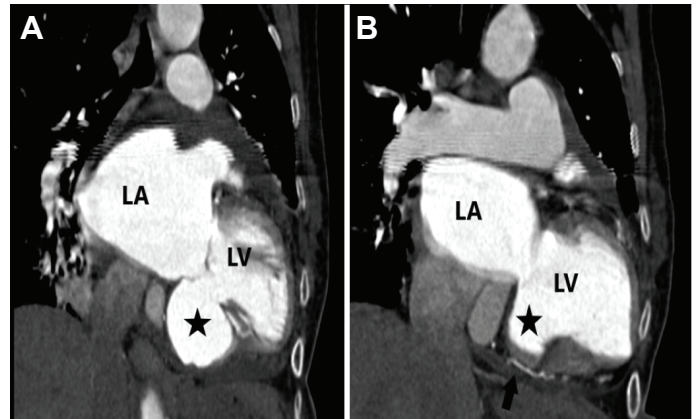


Figure 3. Cardiac CT scan showing the left ventricular aneurysm (indicated by a black star) and its proximity to the posterolateral artery (indicated by a black arrow).

Peer-review: Internally peer-reviewed.

Author Contributions: Concept – Ö.F.A., S.A.; Design – Ö.F.A., M.D.; Supervision – S.A., F.E.U.; Materials – M.D., F.E.U.; Data Collection and/or Processing – Ö.F.A., F.E.U.; Analysis and/or Interpretation – Ö.F.A., M.D.; Literature Review – Ö.F.A., M.D.; Writing – Ö.F.A., S.A. Critical Review – Ö.F.A., F.E.U.

Conflict of Interest: The authors have no conflicts of interest to declare.

Funding: The authors declared that this study received no financial support.

Video 1. Image of a muscle bridge in the posterolateral branches of the right coronary artery, as seen on coronary angiography.

Video 2. Severe mitral regurgitation visualized on transesophageal echocardiography.