CASE IMAGE

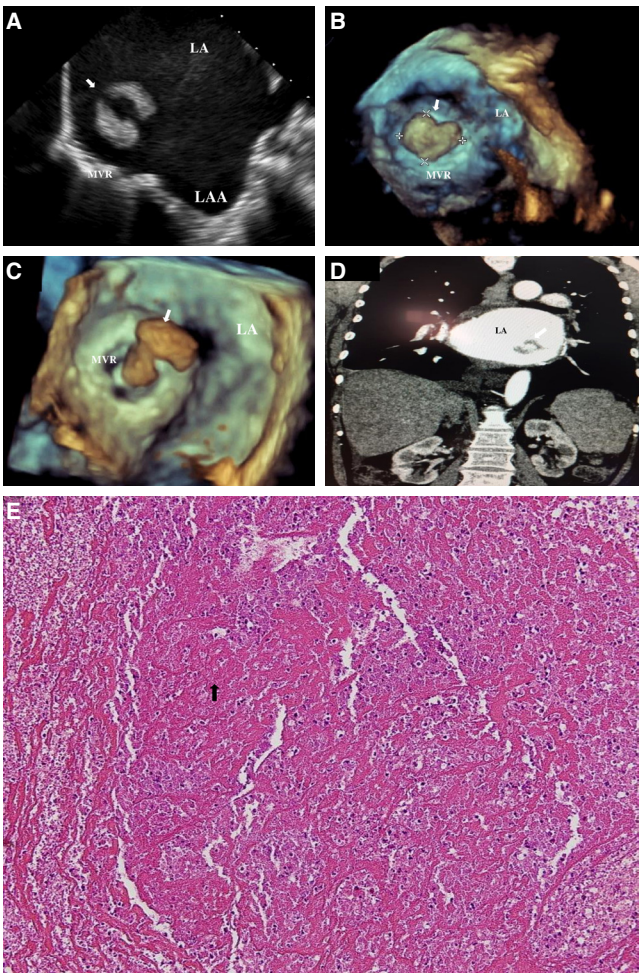
A ping pong ball in the left atrium

Sol atriyum içindeki pinpon topu

Mehmet Çelik
Ahmet Güner
Emine Alpay
Cüneyt Toprak
Gökhan Kahveci

Department of Cardiology, Kartal Koşuyolu Yüksek İhtisas Training and Research Hospital, İstanbul, Turkey

A 47-year-old female was admitted to emergency service with syncope. Her medical history included mitral valve replacement surgery for mitral regurgitation 20 years prior, and the use of warfarin. Physical examination was unremarkable, with the exception of irregular prosthetic valve sounds. Electrocardiography revealed atrial fibrillation with an average heart rate of 80 bpm. Detailed anamnesis also revealed that she had previously experienced >2 near-syncope episodes. On admission, the international normalized ratio was 1.8. Double contour was visible on chest X-ray. Transthoracic echocardiography demonstrated normal prosthetic valve functions and an enlarged left atrium (LA) with a free-floating mass inside, consistent with a thrombus. Transesophageal echocardiography (TEE) confirmed that the LA mass was moving around like a ping pong ball, bouncing off the LA walls and resting on the prosthetic mitral valve once every 1 or 2 cardiac cycles (Figure A). During a real-time dimensional TEE, the mass, approximately 30x30 mm in size, was observed moving freely in the LA and occasionally resting on the mitral valve (Figure B, Video 1*) and without any connection to the LA wall (Figure C, Videos 2* and 3*). Since the mass was untethered and the presence of intense spontaneous echo contrast in an enlarged LA (6.4 cm) was observed, the mass was thought to be a thrombus. Contrast-enhanced computed tomography also demonstrated an enlarged LA harboring a mass lesion consistent with a thrombus (Figure D). Surgical excision confirmed the presence of a free-floating mass in the LA and the diagnosis of thrombus was corroborated with macroscopic and histopathological examinations (Figure E). The patient was subsequently discharged uneventfully and no adverse events were seen during postoperative 10 months of follow-up. A free-floating, ball-like thrombus in the LA is a rare finding with possible catastrophic complications unless diagnosed and treated early. Presented is a case of a large, free-floating thrombus in the LA that caused syncope by transiently obstructing the mitral valve orifice.



Figures– (A) Two-dimensional transesophageal echocardiography (TEE) demonstrates intense spontaneous echo contrast in the enlarged left atrium and a free-moving thrombus (white arrow). **(B)** Three-dimensional TEE shows a heart-shaped thrombus moving freely in the left atrium and occasionally resting on the mechanical mitral valve orifice (white arrow). **(C)** Three-dimensional TEE illustrates an untethered thrombus in the left atrium (white arrow). **(D)** Contrast-enhanced computed tomography angiography reveals a free-floating thrombus in the left atrium (white arrow). **(E)** Histopathological image of the left atrial thrombus (black arrow) (LAA: Left atrial appendix; LA: Left atrium; MVR: Mitral valve replacement; RT-3D TEE: Real-time 3-dimensional transesophageal echocardiography; TEE: Transesophageal echocardiography).

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