

## Is the PFO Tunnel a Gate or a Source of the Thrombus?

### PFO Tüneli Trombüs için bir Kaynak mı Yoksa Sadece bir Geçit mi?

A 53-year-old female patient was admitted to our outpatient clinic due to palpitation. Her electrocardiogram showed atrial fibrillation with a rapid ventricular response. Transthoracic echocardiography showed mild left ventricular systolic dysfunction and rheumatic mitral valve stenosis. Transesophageal echocardiography showed the mitral valve area to be 1.89 cm<sup>2</sup> with 3-D multiplanar reconstruction and mild mitral regurgitation (Figure 1 and Video 1\*). We observed spontaneous echo contrast in the left atrium and left atrial appendage (Video 2\*). The patent foramen ovale (PFO) tunnel was evaluated on the mid-esophageal 4-chamber, aortic short axis, and bicaval views (Figure 2). A thickened tunnel with a hypoechoic thrombus image of 5.5 × 12.3 mm was observed (Video 3 and 4\*). There was no shunt through PFO on color Doppler images. Although some previous case reports have reported straddling thrombi extending from the right atrium to the left atrium via the PFO, our patient had an in situ thrombus inside the PFO tunnel. The following questions remain controversial: is the PFO a gate that transfers the thrombus from the lower extremity to the left atrium in cryptogenic stroke, or should we always keep in mind the possibility of in situ thrombus formation in long-tunnel PFO?

The heart team decided to follow up the patient with anticoagulant therapy because of mild mitral valve stenosis.

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

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

### CASE IMAGE OLGU GÖRÜNTÜSÜ

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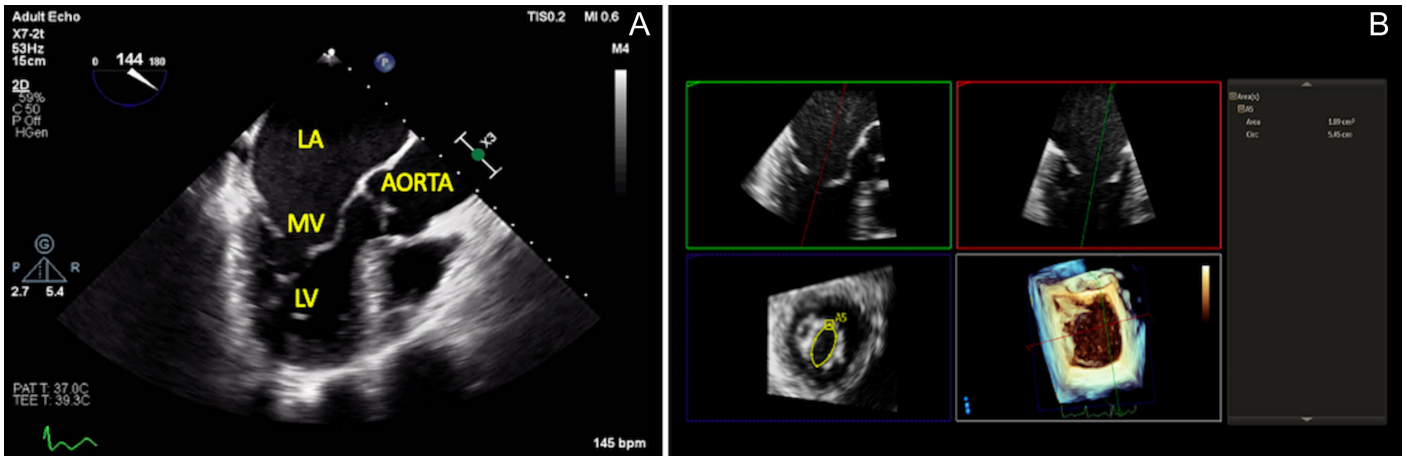


Figure 1. A, B. (A) Rheumatic structure of mitral valve and doming movement in the anterior leaflet are observed in the mid-esophageal 2-chamber window. (B) Mitral valve area was measured as 1.89 cm<sup>2</sup> by 3-D multiplanar-reconstruction method. LA, left atrium; MV, mitral valve; LV, left ventricle.

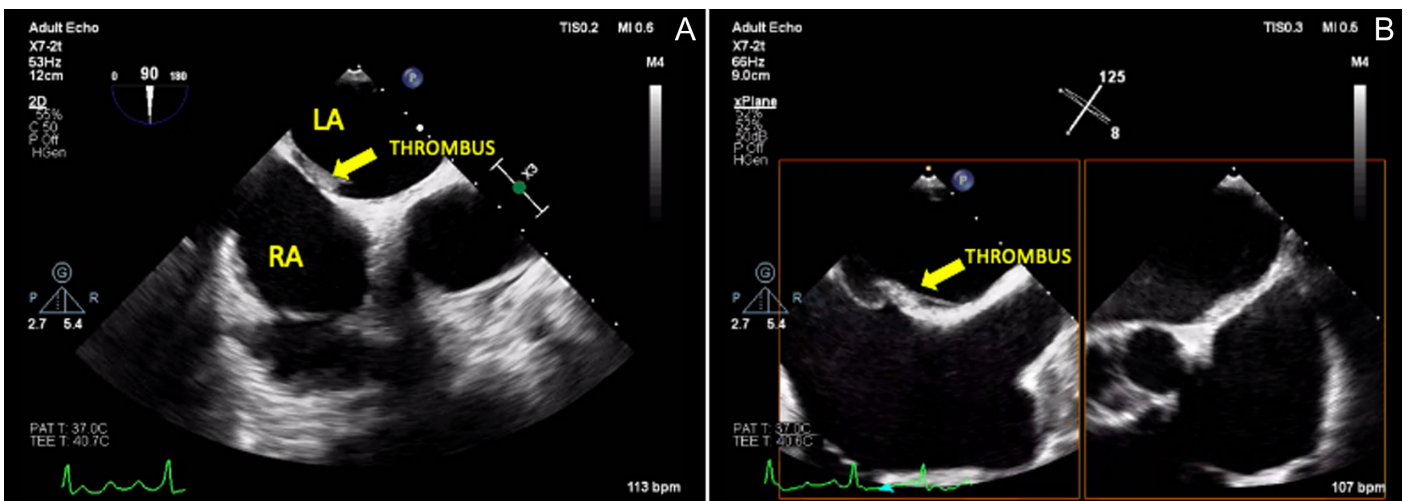


Figure 2. A, B. (A) The PFO tunnel and thrombus are observed in the mid-esophageal short axis window. (B) X-plane view of the bicaval window PFO tunnel and the thrombus image inside.