Left atrial appendage membrane: a rare anatomical variant

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A 77-year-old lady underwent transoesophageal echocardiography (TOE) to assess her mitral valve. A partially obstructive membrane was found within the mid-cavity of the left atrial appendage (LAA), with flow acceleration on colour Doppler (Panel B, Supplementary data online, Movie 2) but preserved filling and emptying velocities on pulsed Doppler. The presence of a discrete membrane was confirmed on Cardiac CT scan (Panels D and E). LAA membrane (Panels A1 and C, Supplementary data online, Movies 1 and 3) is a rare anatomical variant whose clinical implication is not known.

In theory, the presence of a membrane could alter the flow in such a way as to promote thrombus formation. The LAA also plays a role in modulating left atrial pressure and volume, such that a membrane could promote atrial dysrhythmia.

Panels A1 and A2: Two-dimensional and colour flow (colour compare) TOE from the mid-oesophageal two chamber 90° LAA view showing a membrane within the cavity of LAA.

Panel B: Colour flow TOE from the mid-oesophageal LAA view 130° showing flow acceleration.

Panel C: Three-dimensional TOE of LAA with arrow pointing at membrane in body of LAA. Panels D and E: Cardiac CT scan: arrows pointing towards LAA membrane.

Supplementary data are available at European Heart Journal – Cardiovascular Imaging online.