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FLASHLIGHTS
Cardiac imaging

Anomalous band in the left atrium: a rare embryologic remnant causing severe mitral regurgitation

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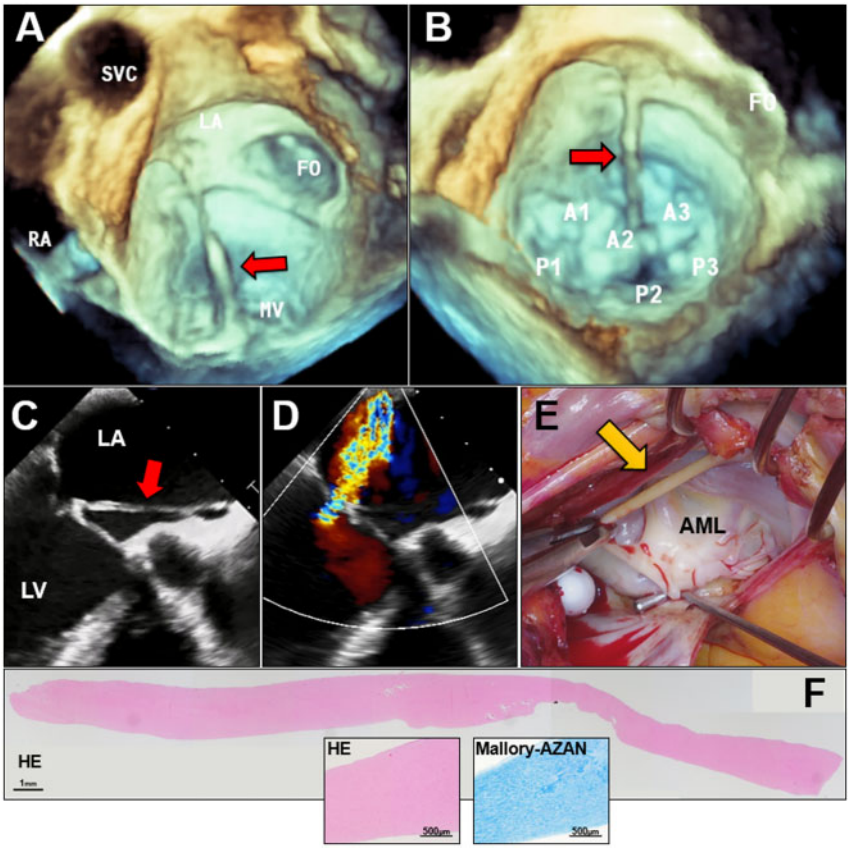

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The videos are available in the online version of this article.

A 62-year-old woman with severe mitral regurgitation and paroxysmal atrial fibrillation was referred to our echocardiography laboratory. Two-dimensional and three-dimensional transoesophageal echocardiography revealed an anomalous band bridging the mitral valve (MV) and left atrial wall. The abnormal band originated from the anterior mitral leaflet edge and extended in a fan-like shape to connect with the lower edge of the fossa ovalis (FO) (*Panels A* and *B*, Supplementary material online, *Videos S1–S3*). Mitral regurgitation originated from the A2 position, where the anomalous band was located (*Panels C* and *D*, Supplementary material online, *Video S4*). Transthoracic echocardiography and cardiac computed tomography images are shown in the Supplementary material online, *Figure*. There were no other pathologic findings, such as MV stenosis or other congenital heart disease. Surgical resection of the anomalous band followed by MV repair was successfully performed. Operative findings revealed a fibrous anomalous band similar to a chordae tendineae connecting the A2 leaflet of the MV to the mid to inferior FO (*Panels B* and *E*, Supplementary material online, *Video S5*). Histopathology revealed that the anomalous band was composed of fibrous connective tissue with elastic fibres (*Panel F*). The anomalous band had membranous continuity with the FO, and we speculated that this rare anomalous structure might have developed in the embryonic course of cardiac separation, during the development of MV and interatrial septum from the atrioventricular cushion. AML, anterior mitral leaflet; HE, haematoxylin and eosin; LA, left atrium; LV, left ventricle; RA, right atrium; SVC, superior vena cava.

Supplementary material

Supplementary material is available at *European Heart Journal - Case Reports* online.

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Consent: The author/s confirm that written consent for submission and publication of this case report including image(s) and associated text has been obtained from the patient in line with COPE guidance.