



# Myocardial bridging, a trigger for Takotsubo syndrome

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A 71-year-old female presented with angina and ST elevation in leads V2–V4 on the electrocardiogram. Coronary angiography excluded stenotic lesions. A wrap-around left anterior descending (LAD) with myocardial bridging in the mid-segment was observed (Fig. 1a, d, arrowheads, Video 1). Intravascular ultrasound demonstrated systolic compression of the mid-LAD with a minimum lumen area of 3.06 mm<sup>2</sup> (systole) to 5.02 mm<sup>2</sup> (diastole) and an echolucent region between the bridged segment and epicardial tissue persisting throughout the cardiac cycle ('half-moon sign') (b, e, arrows, Video 2) [1]. Left ventriculography revealed mid-apical ballooning (c, f, arrowheads, Video 3), corresponding with the diagnosis of Takotsubo syndrome. High-sensitive troponin-T (normal  $\leq 30$  ng/l) was elevated, reaching a peak (590 ng/l) after 12 h. The patient recalled no trigger. At follow-up she was asymptomatic with normal echocardiography (Video 4).

Myocardial bridging of a wrap-around LAD has been associated with Takotsubo syndrome [2]. Cardiologists should

be alert for this presentation given its implication with worse prognosis [3].

**Conflict of interest** A.S. Triantafyllis, S. de Ridder, K. Teeuwen and L.C. Otterspoor declare that they have no competing interests.

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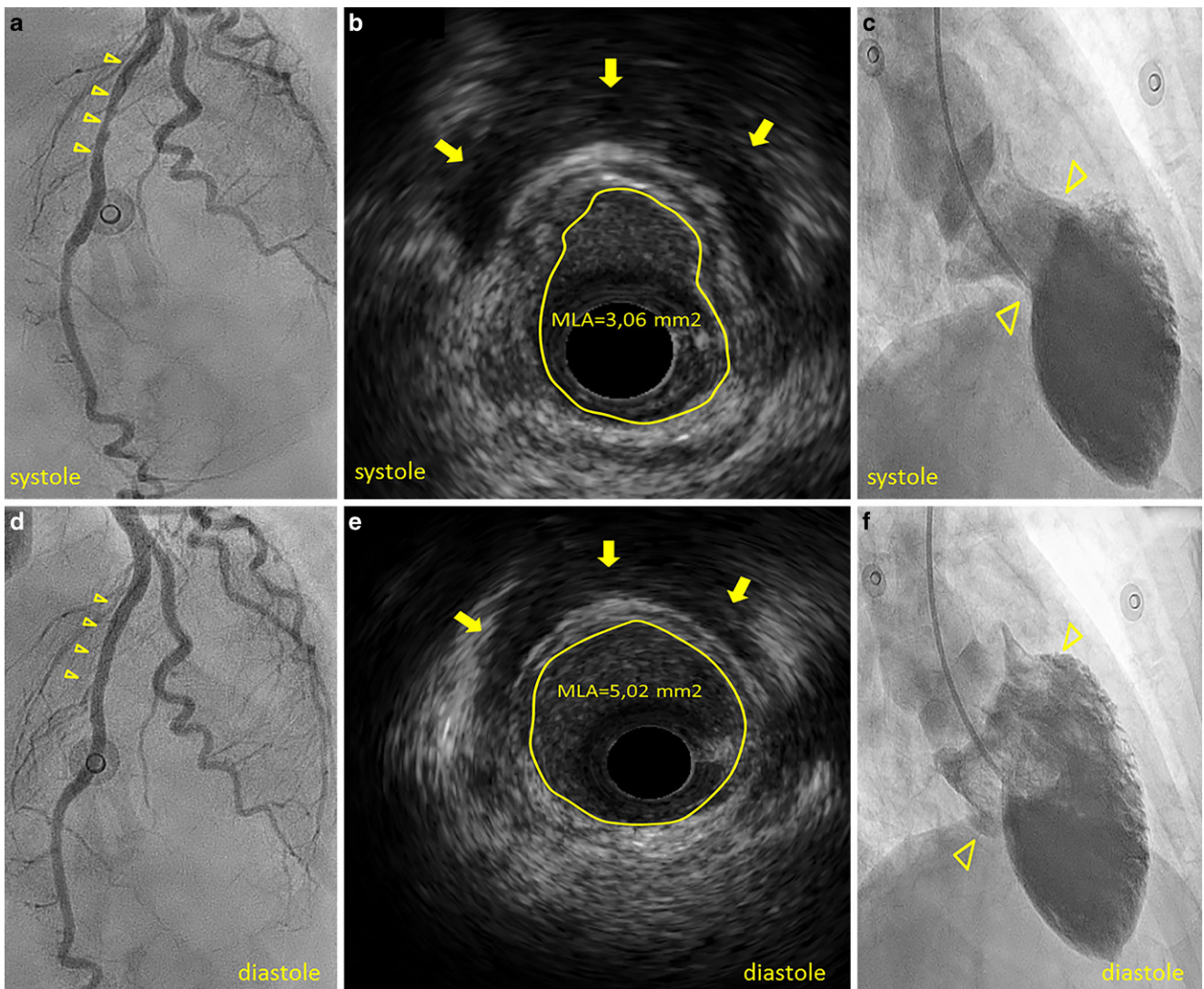
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**Fig. 1** Wrap-around LAD with myocardial bridging in the mid segment (**a** in systole, **d** in diastole, *arrowheads*). Intravascular ultrasound demonstrating systolic compression of the mid-LAD with a mean lumen area oscillating from 3.06 mm<sup>2</sup> in systole (**b**) to 5.02 mm<sup>2</sup> in diastole (**e**) and an echolucent region between the bridged coronary segment and epicardial tissue persisting throughout the cardiac cycle, ‘half-moon sign’ (**b**, **e**, *arrows*). Left ventricular angiography revealing mid-apical ballooning with hypercontractility of the basal segments (**c**, **f**, *arrowheads*, in systole and diastole respectively)