

## An atypical case of reverse stress cardiomyopathy following a gunshot wound

## Gunshot reversed the tako-tsubo

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A 53-year-old man without any past medical history was shot with a gun in the legs and underwent an urgent haemostatic surgical procedure without complications. Two weeks later, he was readmitted for surgical wound revision under general anaesthesia. During the intervention, he developed severe refractory hypotension requiring noradrenaline administration. Blood pressure recovery was slow. No significant blood loss was reported. A little lateral ST-segment depression was highlighted on the 12-lead electrocardiogram, suggesting acute coronary syndrome. Transthoracic echocardiography showed severe basal akinesia with apicolateral segmental hyperkinesis (fig. 1A and B). After haemodynamic stabilisation, cardiac catheterisation was performed and showed normal coronary arteries. A left ventricular angiogram confirmed basal hypokinesia with preserved mid-ventricular and apical contractility (fig. 1C and D). This pattern is typical of the rare reverse stress cardiomyopathy (basal type of tako-tsubo disease). After 3 weeks of medical treatment, left ventricular function returned to normal and the patient fully recovered.

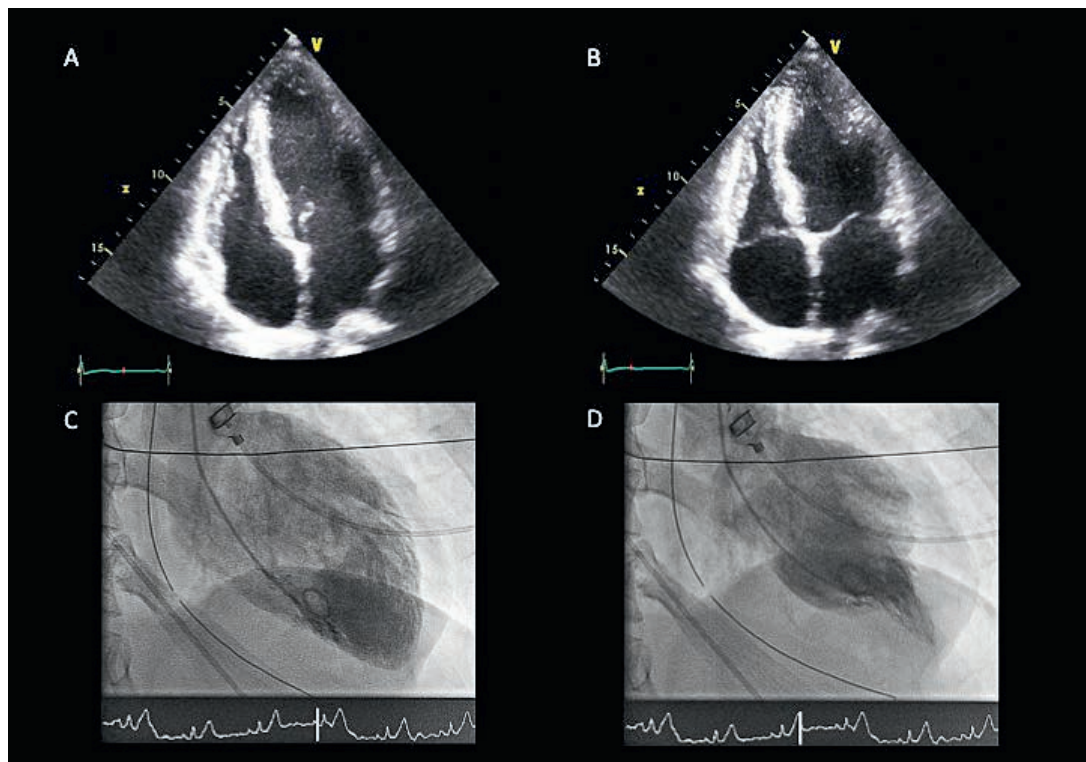
Clinicians should consider tako-tsubo cardiomyopathy in patients with prior major stress who develop acute coronary syndrome or haemodynamic instability [1]. Although middle-aged females are more likely to develop stress cardiomyopathy, this case reminds us that it can occur in men, even with a very atypical mode of presentation [2, 3].

**Disclosure statement**

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**References**

- 1 Dote K, Sato H, Tateishi H, Uchida T, Ishihara M. Myocardial stunning due to simultaneous multivessel coronary spasms: a review of 5 cases. *J Cardiol*. 1991;21(2):203–14. Article in Japanese.
- 2 Kurowski V, Kaiser A, von Hof K, Killermann DP, Mayer B, Hartmann F, et al. Apical and midventricular transient left ventricular dysfunction syndrome (tako-tsubo cardiomyopathy): frequency, mechanisms, and prognosis. *Chest*. 2007;132(3):809–16. doi:<http://dx.doi.org/10.1378/chest.07-0608>.
- 3 Sharkey SW, Lesser JR, Zenovich AG, Maron MS, Lindberg J, Longe TF, et al. Acute and reversible cardiomyopathy provoked by stress in women from the United States. *Circulation*. 2005;111(4):472–9. doi:<http://dx.doi.org/10.1161/01.CIR.0000153801.51470.EB>.



**Figure 1:** Four-cavity echocardiographic view in diastole (A) and systole (B) with severe basal akinesia and apicolateral segmental hyperkinesis. Left ventricular angiogram in diastole (C) and systole (D) showing basal hypokinesia with preserved mid-ventricular and apical contractility.

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