Takotsubo cardiomyopathy during elective general anaesthetic induction

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DESCRIPTION
This 55-year-old lady became acutely hypotensive during induction of anaesthesia with fentanyl, propofol and atracurium for elective cholecystectomy. She developed anterior ST segment elevation and runs of ventricular tachycardia. The operation was abandoned, and subsequent ECGs showed a deep T-wave inversion in the anterolateral leads (figure 1). Her troponin was elevated.

The patient underwent cardiac catheterisation which showed normal coronary arteries. Left ventricular angiography showed systolic ballooning of the apex with hyperdynamic contraction of the base (figure 2). The appearances were characteristic of Takotsubo cardiomyopathy. The patient subsequently made a full recovery and left ventricular function returned to normal within days.

Takotsubo cardiomyopathy is a rare condition and is also known as transient left ventricular apical ballooning syndrome, stress cardiomyopathy or broken heart syndrome. It has typically been associated with acute chest pain in postmenopausal women following a stressful life event. Over the last few years, there have been case reports of Takosubo cardiomyopathy associated with exacerbations of psychiatric illness,1 pheochromocytoma,2 acute subarachnoid haemorrhage,3 sepsis, drugs and anaesthesia. It now seems more common than previously thought with multiple precipitating factors. Excessive catecholamine secretion has been suggested as the likely mechanism for myocardial dysfunction. This case illustrates an unusual presentation with dramatic...
Takotsubo is a rare transient cardiomyopathy associated with chest pain, acute ST elevation and troponin release.

The key finding is transient apical left ventricular systolic dysfunction (apical ballooning) seen on imaging (echo, angiography and cardiac MR) associated with no significant epicardial coronary stenosis.

Multiple causes including acute stress, anaesthetic induction, sepsis, pheochromocytoma, drugs, acute subarachnoid haemorrhage and acute psychiatric illness. The underlying mechanism is thought to be acute excessive catecholamine release.

Competing interests None.

Patient consent Obtained.

REFERENCES