

which is not confined to any single vascular territory. Inverse takotsubo cardiomyopathy is seen in less than 40% of patients with stress cardiomyopathy (Lemke et al, 2008) where apical sparing and basal wall hypokinesia or akinesia has been noticed.

The case presented here demonstrates myocardial stunning secondary to emotional stress, with rapid recovery of the left ventricular function in a young woman. There is no validated criterion to aid diagnosis, but it is agreed that the phenomenon is delineated by the specific changes on echocardiography of akinesia or hypokinesia and lack of vascular abnormalities on cardiac catheterization in the presence of emotional or physical stress (Haghi et al, 2006).

The non-vascular aetiology in this case was proved by non-invasive coronary computed tomography angiogram. Coronary computed tomography angiogram has high

negative predictive value, avoids the complications of an invasive procedure and is cost-effective (Herzog et al, 2007).

Treatment remains empirical and symptomatic. Given the rapid reversibility of takotsubo cardiomyopathy, careful manipulation of fluids and short-term use of inotropes may be sufficient. Complications associated with takotsubo cardiomyopathy include ventricular thrombus formation, congestive heart failure, lethal ventricular arrhythmia, ventricular septal perforation and mitral regurgitation (Lemke et al, 2008). **BJHM**

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Haghi D, Fluechter S, Suselbeck T et al (2006) Takotsubo cardiomyopathy (acute left apical ballooning syndrome) occurring in the intensive care unit. *Intensive Care Med* **32**: 1069–74 (doi: 10.1007/s00134-006-0111-z)

Herzog C, Zangos S, Zwerner P, Costello P, Vogl TJ, Schoepf UJ (2007) CT of coronary artery disease. *J Thorac Imaging* **22**: 40–8 (doi: 10.1097/RTI.0b013e318032394f)

Kawaji T, Shiomi H, Morimoto T et al (2015) Clinical impact of left ventricular outflow tract obstruction in Takotsubo Cardiomyopathy. *Circ J* **9**(4): 839–46 (doi: 10.1253/circj.CJ-14-1148)

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LEARNING POINTS

- Even though takotsubo cardiomyopathy commonly occurs in postmenopausal women it can manifest in younger women as in this case.
- Computed tomography coronary angiogram negates the need for invasive coronary angiogram and possible complications associated with it.

IMAGES IN MEDICINE

Charcot–Marie–Tooth neuropathy and Mobitz II heart block

A 58-year-old man presented with a 10-day history of worsening dizziness and a sensation that he would 'pass out'. The history included a diagnosis of Charcot–Marie–Tooth syndrome

Figure 1. Lower limbs showing characteristic features (inverted champagne bottle) of peroneal muscular atrophy.



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(Figure 1). His two brothers and his father also have this peripheral neuropathic disorder. Blood tests, including thyroid function, were normal, as was a chest radiograph and echocardiogram. The electrocardiogram revealed a heart rate of 36 beats/min and second degree (Mobitz II) heart block (Figure 2). He was referred for dual chamber pacemaker implantation.

Charcot–Marie–Tooth syndrome, also termed peroneal muscle atrophy, comprises a collection of genetic disorders that result in progressive peripheral neuropathy. The prevalence is around 1:2500 of population. It usually affects the distal lower limb muscles but on occasions the intrinsic muscles of the hands. The heart is

infrequently involved, but when present, conduction disease is the most frequent finding. In a study of 68 patients with Charcot–Marie–Tooth syndrome, five had conduction defects (Isner et al, 1979). This association with conduction disease remains controversial, most of the evidence being isolated case reports. The occurrence of advanced second degree heart block heart block, with or without symptoms, in any variant of Charcot–Marie–Tooth syndrome, is a class 1 indication for pacemaker implantation. **BJHM**

Isner JM, Hawley RJ, Weintraub AM, Engel WK (1979) Cardiac findings in Charcot–Marie–Tooth disease. A prospective study of 68 patients. *Arch Intern Med* **139**(10): 1161–5

Figure 2. Electrocardiographic rhythm strip showing second degree (Mobitz II) atrioventricular heart block. P waves are indicated 'P'.

