



<http://dx.doi.org/10.1016/j.jemermed.2017.01.024>

Ultrasound in Emergency Medicine

THE ROLE OF EARLY FOCUSED CARDIAC ULTRASOUND IN A NOT-SO-TYPICAL PRESENTATION OF TAKOTSUBO CARDIOMYOPATHY: A CASE REPORT

Jithin G. Varghese, BA,* Qurat-ul-ain Jelani, MD,* Stuart Zarich, MD,* and Brooks Walsh, MD†

*Division of Cardiology, Department of Internal Medicine, Bridgeport Hospital, Bridgeport, Connecticut and †Department of Emergency Medicine, Bridgeport Hospital, Bridgeport, Connecticut

Corresponding Address: Brooks Walsh, MD, Department of Emergency Medicine, Bridgeport Hospital, 267 Grant Street, Bridgeport, CT 06610

Abstract—Background: Focused cardiac ultrasound (FoCUS) can be extremely helpful in identifying unexpected diagnoses that can significantly alter treatment options. The diagnosis of Takotsubo cardiomyopathy (TCM) may be difficult to identify. **Case Report:** We describe a 47-year-old woman who presented to the emergency department (ED) with atypical features of TCM. Her clinical features included being a premenopausal woman with mild chest pain with a lack of identifiable emotional or physical stressors or significant electrocardiographic changes. Initial findings on FoCUS were consistent with TCM, with these findings replicated on repeat bedside echo performed in the ED by the cardiology fellow. A subsequent comprehensive echo showed marked improvement of the TCM pattern within 24 hours. **Why Should an Emergency Physician Be Aware of This?:** TCM may present in younger women or men, without obvious preceding physical or emotional stressors and with nonspecific ECG findings. FoCUS performed in the ED may suggest a diagnosis of TCM in patients with chest pain or dyspnea of uncertain etiology. The performance of FoCUS, as highlighted by this case report, can lead to timely intervention and follow-up of a variety of cardiac conditions. © 2017 Elsevier Inc. All rights reserved.

Keywords—focused cardiac echocardiography; lack of stressors; premenopausal; Takotsubo cardiomyopathy

INTRODUCTION

First reported in Japan in 1990, Takotsubo cardiomyopathy (TCM; also known as Apical ballooning syndrome, broken heart syndrome, and stress-induced cardiomyopathy) is now estimated to occur in 1–2% of patients with acute myocardial infarction (MI). The underlying pathophysiologic mechanisms remain poorly understood. Transient regional wall motion abnormalities in the classic apical ballooning pattern is the hallmark of TCM, although atypical echocardiographic patterns have been noted (1). We describe a case report of TCM with atypical clinical features (a premenopausal woman with no identifiable emotional or physical stressors without significant echocardiographic [ECG] changes). We highlight the early detection of TCM via focused cardiac ultrasound (FoCUS) in the emergency department (ED) and the rapid reversibility of cardiac dysfunction.

CASE REPORT

A 47-year-old woman presented to the ED with a 6-hour history of chest pain and dyspnea. The symptoms began

Reprints are not available from the authors.

Streaming video: A video clip accompanying this article is available in streaming video at www.journals.elsevierhealth.com/periodicals/jem. Click on Video 1.

RECEIVED: 26 September 2016; FINAL SUBMISSION RECEIVED: 3 January 2017;

ACCEPTED: 22 January 2017

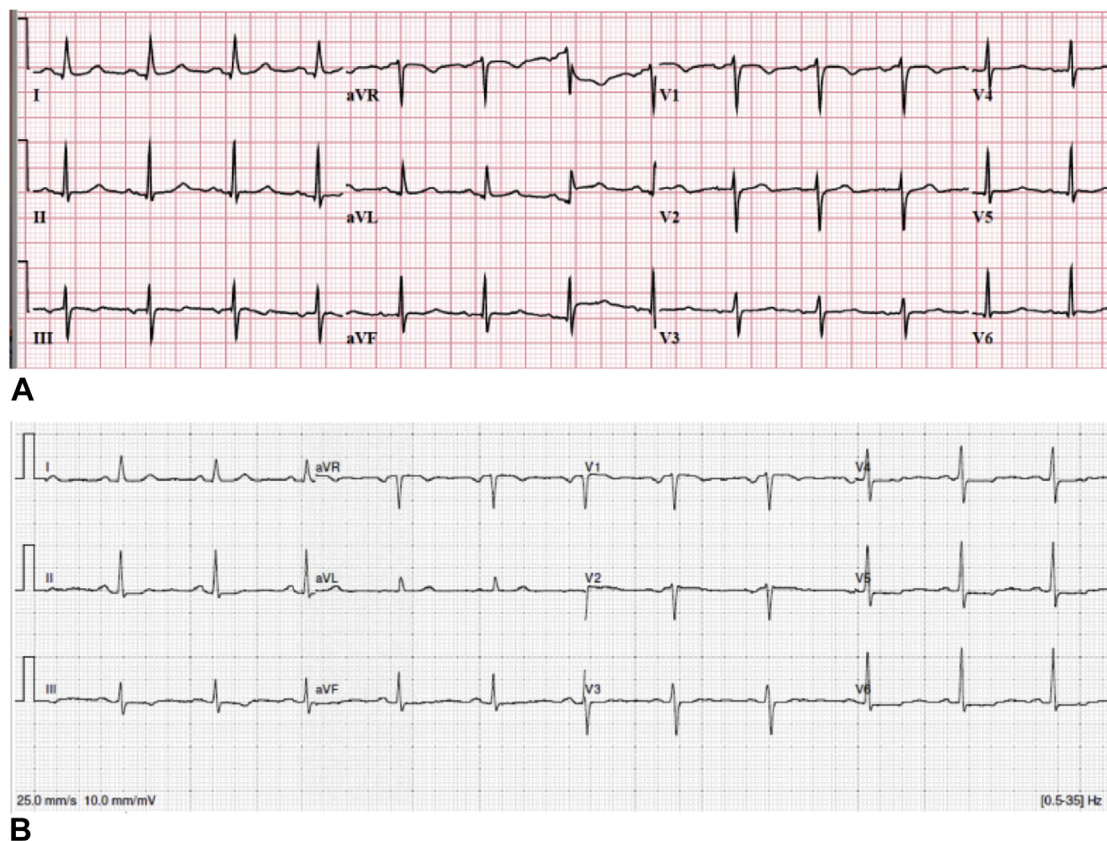


Figure 1. A and B, Electrocardiography results on admission showing a normal sinus rhythm and an electrocardiogram obtained 16 days postadmission.

while she was attending her daughter's soccer tournament. She denied any frightening or emotional events at the game. While walking back to her car, she noted the onset of chest pain and dyspnea. These symptoms slowly resolved during her drive home. However, they recurred later that night and she presented to the ED.

Her medical history was significant only for hypothyroidism on replacement therapy. Her vital signs were unremarkable except for mild tachypnea, and her only pertinent physical finding was jugular venous distension. The ECG showed normal sinus rhythm at 90 beats/min with nonspecific T wave flattening, without significant ST segment shifts (Figure 1). Her initial troponin level was elevated at 1.89 ng/mL (99th percentile <0.034 ng/mL).

FoCUS was performed in the ED, revealing akinesis of the midventricular segments of the left ventricle (LV) extending to the apex with apical ballooning, hyperkinesis of the basal segments, and a moderately reduced ejection fraction (EF) of 35–40%, consistent with TCM (Video 1; Figure 2). In addition, the inferior vena caval index was <50% (Figure 3), and thoracic ultrasound revealed interstitial findings consistent with pulmonary edema (Figure 4) (2). Furosemide 40 mg intravenously, metoprolol 25 mg orally every 12 hours, aspirin 81 mg orally,

and intravenous heparin were administered. Repeat comprehensive echocardiography the following day revealed an improved EF at 50–55% with only focal distal septal and apical hypokinesis that had markedly improved from prior study.

Cardiac catheterization was subsequently performed and revealed normal coronary arteries. Left ventriculography revealed a normal sinus cavity with persistent focal hypokinesis of the apex. She was subsequently discharged, and a repeat ECG 16 days later showed normal LV size, thickness, and function, with an EF of 65%. No segmental wall motion abnormalities were appreciated.

DISCUSSION

We describe a premenopausal woman without a preceding stressor who presented with an unremarkable ECG but with classic echocardiographic and coronary catheterization findings of TCM. This atypical presentation for TCM was immediately recognized upon performing FoCUS in the ED. The clinical presentation was atypical for TCM, in that our patient was premenopausal with neither a significant stressor nor significant ECG abnormalities.

Download English Version:

<https://daneshyari.com/en/article/5653440>

Download Persian Version:

<https://daneshyari.com/article/5653440>

[Daneshyari.com](https://daneshyari.com)