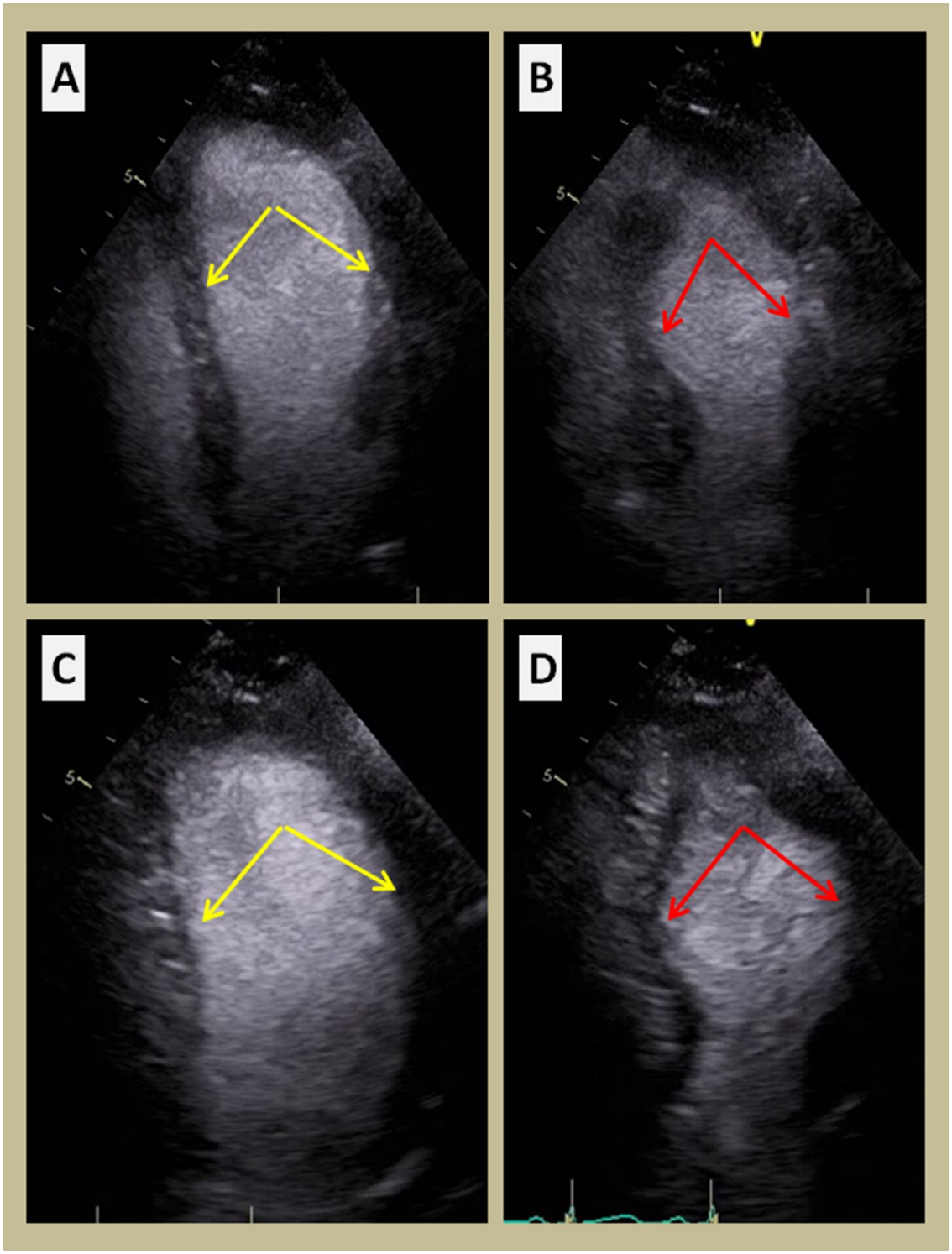
Mid Left Ventricular Takotsubo: *A Stress Cardiomyopathy Variant!*

Sanchitha Nagaraj, M.D.[a], Nupur Shah, M.D.[a], Celestine Odigwe, M.D.[a],
Christopher Malozzi, D.O.[a], Bassam Omar, M.D., Ph.D.[a, b]



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Description

The above transthoracic echocardiogram images demonstrate 2-dimensional (2D) apical 4-chamber view frames in end-diastole (A) and end-systole (B) revealing bulging out (dyskinesis) of the mid anterolateral and inferoseptal wall segments of the left ventricular (LV) cavity. The 2-D apical 2-chamber views in diastole (C) and systole (D) demonstrate a similar mid LV cavity bulging of the anterior and inferior wall segments. The exclusive wall motion abnormality of the middle LV segments, sparing the basal and apical segments, is a rare variant of stress cardiomyopathy (Takotsubo).

Discussion

Takotsubo cardiomyopathy was first reported in Japan in the 1990s and initially attributed to multivessel vasospasm [1]. It is defined as temporary wall motion abnormality of the left ventricle in the absence of obstructive coronary artery disease correlating with such wall motion abnormality [2]. It is thought to be caused by enhanced sympathetic stimulation resulting in potential plaque rupture, multi-vessel spasm of the coronary arteries, direct myocyte catecholamine cardiotoxicity, and dysfunction of the microcirculation [3]. It is predominantly found in postmenopausal women and presents after significant emotional or physical stressors [4]. Patients can present with acute coronary syndrome signs and symptoms, elevated troponin, and ST-elevation on EKG, especially in atypical variants [5].

Takotsubo cardiomyopathy can be widely classified as a typical variant which is more common and has apical ballooning of the LV during systole with hyperkinesis of basal segments, mimicking acute myocardial infarction [6]. However, other atypical variants also exist such as basal, focal, mid-ventricular, biventricular, isolated right ventricular and global Takotsubo cardiomyopathy [7]. Mid-ventricular Takotsubo cardiomyopathy is a rare (~15%) and reversible myocardial injury presenting with distinctive regional wall motion abnormalities of the mid LV segments [8]. Rare occurrence of different Takotsubo ballooning patterns in the same patient has been reported [9]. Diagnostic workup of Takotsubo syndrome based on clinical presentation, biomarkers, imaging and calculation of an InterTAK diagnostic score has been suggested [10].

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a Division of Cardiology. University of South Alabama, Mobile, AL 36617

b Corresponding Author: Bassam Omar, Division of Cardiology, University of South Alabama, 2451 USA Medical Center Dr., Mobile, AL 36617, USA.

Email: bomar@health.southalabama.edu

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