

Letter to the Editor



What Can We Do to Explore the Phenomenon of Involvement of Different Myocardial Territories in Recurrent Takotsubo Syndrome?

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Conflict of Interest

The author has no financial conflicts of interest.

To the Editor:

I enjoyed very much reading the article by Amoran et al.,¹⁾ describing a 51-year-old woman who suffered takotsubo syndrome (TTS), triggered by severe cyclic vomiting syndrome (CVS) secondary to gastroparesis, which was followed by 3 recurrent TTS episodes emerging in 5, 14, and 19 months after the 1st index TTS episode, and with the 1st and 3rd recurrent TTS episodes triggered also by CVS. The patient developed her 4 TTS episodes showing sequentially the midventricular, apical, midventricular, and basal (or reverse or inverse) morphological left ventricular phenotypes. Incidentally the provided 4 movies are superior to the information provided by the corresponding still echocardiograms,¹⁾ and are particularly useful for patients suffering recurrent TTS. Repeated recurrent TTS episodes have been noted previously, and often tend to involve different myocardial territories.²⁾ It is of interest that the 1st and 3rd TTS episodes of midventricular involvement were 14 months apart, perhaps providing the midventricular region time to recover from the consequent to the 1st episode myocardial denervation, and thus show the same response to the elevated catecholamines as the 1st episode. A few things needed to be explored in recurrent TTS are: 1) electrocardiograms occasionally show preferential changes in leads I and aVL, precordial leads, and upright T-waves in precordial leads, in the midventricular, apical, and basal, TTS phenotypes, correspondingly; 2) levels of blood borne catecholamines³⁾ in the different TTS phenotypes; 3) levels of peak troponins in the different TTS phenotypes; 4) extent of the reduction of left ventricular ejection fraction in the different TTS phenotypes; 5) monitoring thoracic sympathetic nerve activity signals, a surrogate of stellate ganglia activity, in conjunction with the different TTS phenotypes⁴⁾; 6) assessment of the regionality of myocardial edema, evaluated by cardiac magnetic resonance imaging, associated with different TTS phenotypes⁵⁾; and 7) ¹²³I-metaiodobenzylguanidine myocardial scintigraphy to document transient cardiac autonomic sympathetic denervation and its course⁵⁾, associated with different TTS phenotypes.

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The author reply: Recurrence of Different Types of Takotsubo Cardiomyopathy

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The authors appreciate the interest in our work.¹⁾ We discussed the 4 recurrence of 3 different phenotypes of takotsubo cardiomyopathy associated with severe cyclic vomiting syndrome. We need more investigations to better understand the pathophysiology and risk of developing recurrent takotsubo cardiomyopathy. In addition, we agree with Dr. Madias that more studies should look into cardiac biomarkers and cardiac imaging (echocardiography using global longitudinal strain, cardiac magnetic resonance imaging, and cardiac scintigraphy) in different phenotypes of takotsubo cardiomyopathy.²⁾ Understanding how a patient can have recurrence of different phenotypes of takotsubo cardiomyopathy may provide insight into the pathogenesis of microvascular dysfunction.

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