

## Editorial



# Time Course of Functional Recovery and ECG Change in Takotsubo Cardiomyopathy

Yong Hyun Park , MD, PhD

Division of Cardiology, Department of Internal Medicine, Pusan National University Yangsan Hospital, Yangsan, Korea

## OPEN ACCESS

► See the article “Time course of functional recovery in Takotsubo (stress) cardiomyopathy: serial speckle tracking echocardiography and electrocardiography study” in volume 28 on page 50.

**Received:** Dec 4, 2019

**Accepted:** Dec 5, 2019

### Address for Correspondence:

**Yong Hyun Park, MD, PhD**

Division of Cardiology, Department of Internal Medicine, Pusan National University Yangsan Hospital, 20 Geumo-ro, Mulgeum-eup, Yangsan 50612, Korea.  
E-mail: nadroj70@gmail.com

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### ORCID iDs

Yong Hyun Park   
<https://orcid.org/0000-0001-6122-214X>

### Conflict of Interest

The authors have no financial conflicts of interest.

Takotsubo cardiomyopathy (TTC) is characterized by transient wall-motion abnormalities which are completely recovered within 1 month in usual.<sup>1)2)</sup> Although there have been several studies on the dynamic changes in cardiac function during the short-term period using 2D speckle tracking echocardiography (STE) and electrocardiography (ECG),<sup>3)4)</sup> detailed knowledge about the time course of functional recovery in the acute and subacute phases of TTC is still deficient. As we anticipate that a clear understanding of dynamic changes in the acute and subacute phases of TTC could enhance quick and precise management of TTC, it is worthy of exploring more data on the changes of echocardiography and ECG abnormality during these phases of TTC.

In this issue of the *Journal of Cardiovascular Imaging*, Lee et al.<sup>5)</sup> originally intended to investigate the time course of rapid left ventricular functional recovery in patients with TTC. They took advantage of 2D STE and ECG as a tool for the analysis, because 2D STE appears to be more sensitive for detecting subtle myocardial abnormalities<sup>6)7)</sup> and ECG is the simplest and the most widely available diagnostic test.<sup>8)9)</sup> On the contrary to their original intent, they could not show the precise time course of recovery in TTC partly because they performed only two evaluations during hospitalization even at a different time point.

Although this study has several limitations, it has advantages over other studies in that it showed time course of longitudinal strain in bull's eye map and T-wave abnormalities in ECG simultaneously in the mid-ventricular type, as well as the apical type. Also it showed the difference in ECG change according to the type of TTC.

In conclusion, Lee et al.<sup>5)</sup> found that left ventricular ejection fraction and global longitudinal strain recovered continuously throughout the acute and subacute phases and also negative T wave progressed during the acute phase and recovered more slowly during the subacute phase, especially in the apical type.

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