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Letter to the Editor

The challenge of risk stratification in Takotsubo stress cardiomyopathy

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Kim et al. reported that the natural history and predictors of mortality of patients with Takotsubo syndrome (TTS) [1]. Some points about risk stratification in TTS should be discussed.

The prognosis of TTS is with high heterogeneity. The International Takotsubo Registry study showed that TTS patients triggered by physical stress were with higher long-term mortality rates, whereas patients related to emotional stress had better outcomes [2]. This was also documented in Kim's study [1]. However, even triggered by emotional stress, the prognosis may be different in patients with multiple comorbidities. Besides cancer, which had been reported in Kim's study, TTS patients with left ventricular dysfunction, atrial fibrillation, diabetes, older age were with worse prognosis [3,4]. The associations of these comorbidities and mortality should be further evaluated on TTS under different trigger conditions.

Aminoterminal pro-brain natriuretic peptides (NT-proBNP) are the most useful biomarker for judging the severity of heart failure. It had been showed that the levels of NT-proBNP were associated with the mortality in TTS patients [5]. Furthermore, the core pathophysiological mechanisms of TTS were cardiovascular responses to sudden surges in endogenous catecholamine concentrations. It had been reported that plasma catecholamines were 2–4 times higher in TTS patients than those with myocardial infarction. However, these biomarkers were not evaluated in Kim's study.

In conclusion, TTS should not be considered as a benign condition. Risk score model, including parameters such as different trigger conditions, multiple commodities and biomarkers should be developed to guiding the risk stratification of TTS.

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Competing interests

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