The Noninvasive Electrocardiographic Diagnosis of Takotsubo Cardiomyopathy

Key words: takotsubo cardiomyopathy, electrocardiographic diagnosis

To the Editor I read the very interesting article presented by Tsuji et al. (1). The authors showed that Takotsubo cardiomyopathy can be associated with serious outcomes in a few patients, although the prognosis is generally considered to be good.

In some patients, it is difficult to differentiate between Takotsubo cardiomyopathy and acute myocardial infarction based on electrocardiographic findings. However, Kosuge et al. reported that the electrocardiographic findings of ST segment depression in lead aVR and no ST segment elevation in lead V1 show 91% sensitivity and 95% specificity in establishing a diagnosis of Takotsubo cardiomyopathy (2). Furthermore, Kosuge et al. stated that a positive T wave in lead aVR and no T wave in lead V1 are findings pathognomonic of Takotsubo cardiomyopathy (3, 4). In the report described by Tsuji et al., it is difficult to confirm whether or not a significant ST depression was observed on the electrocardiographic examination from the time of hospitalization until admission day 4. However, a mild tendency of ST segment depression in lead aVR on the day of admission was observed compared to a year later. Furthermore, Tsuji et al. reported that the electrocardiographic examination performed on day 15 after admission showed a positive T wave in lead aVR, as reported by Kosuge et al.

We recently encountered a patient with incidentally diagnosed asymptomatic Takotsubo cardiomyopathy in whom giant negative T waves were observed in leads V2-5 during annual electrocardiographic screening. In this case, we observed positive T waves in lead aVR and no negative T waves in lead V1, which is consistent with the findings reported by Kosuge et al. Furthermore, four weeks later, all of the negative T waves in leads V2-5 were observed to have changed to positive, and the positive T wave in aVR had changed to a negative wave. The patient was asymptomatic and requested to be followed-up as an outpatient. However, based on the findings reported by Tsuji et al., observing and monitoring the patient’s course as an in-patient would have been more appropriate.

Because several issues regarding Takotsubo cardiomyopathy remain unclear, reports of serious outcomes, such as those described by Tsuji et al., are helpful. In addition, the noninvasive diagnosis suggested by Kosuge et al. is considered an important diagnostic tool in patients with Takotsubo cardiomyopathy, which may be accompanied by serious systemic diseases.

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References

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