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Response to the letter to the editor: Complete heart block and Takotsubo syndrome: Dissecting the pathophysiology



To the Editor:

We reviewed the letter by John Madias [1] and would like to thank him for the constructive and encouraging remarks regarding our case report. Complete AV block occurring in association with Takotsubo syndrome (TS) has been an enigma, and the cause and effect relationship has not been elucidated. The occurrence of AV block in the context of exaggerated sympathetic activation seems paradoxical. However, we could document the chronological sequence of the occurrence of AV block and the subsequent TS in our patient [2]. As illustrated by our case report, most cases of complete AV block associated with TS that persist on long-term follow-up are probably the triggers of TS rather than its consequence. Nevertheless, transient AV blocks have also been reported in association with TS, but the pathophysiology of rhythm disturbance in such cases has not been elucidated. Whether AV blocks can occur as a consequence of TS is controversial. Life-threatening stressful stimuli are associated with a generalized autonomic storm, with early events dominated by sympathetic effects and later events by parasympathetic effects [3]. Quantifying sympathetic and parasympathetic activity serially from the time of presentation can provide valuable insights into the pathophysiology of this condition. As proposed by Madias, measuring thoracic skin sympathetic activity employing conventional ECG electrodes represents a novel non-invasive surrogate of stellate ganglion activity and the extent of cardiac sympathetic activation [4,5]. We hope that future studies of TS and AV block will incorporate careful assessment of autonomic function that can help in unraveling the association between the two conditions.

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Conflict of interest

None.

References

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