Authors' Response

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Dear Editor,

We would like to thank Dr. Madias for his valuable comment on our original article entitled "QT interval prolongation in Takotsubo syndrome: a frightening feature with no major prognostic impact" published in Monaldi Archives for Chest Disease on December 6, 2023 [1,2].

In this work, we performed a comparative analysis of 113 patients admitted to our Portuguese tertiary care center between June 2005 and November 2022 with a final diagnosis of Takotsubo syndrome (TTS) (according to the revised Mayo Clinic Diagnostic Criteria) with a normal corrected QT interval (QTc) and long QTc (defined as QTc≥460 milliseconds in any electrocardiogram at admission or during hospitalization). We aimed to assess the prevalence and clinical implications of acquired long QT during Takotsubo events and compare in-hospital and long-term outcomes between patients with and without QT interval prolongation. Despite the frequent and often severe repolarization abnormalities seen in TTS, including acquired long QT interval, the underlying mechanism of life-threatening arrhythmias is not completely understood, and the evidence on QT prolongation having a prognostic impact on the short- and long-term follow-up of these patients is sparse and somehow conflicting in literature, as stated by Dr. Madias. In our study, no association was found between prolonged QTc interval during TTS events and adverse prognosis since in-hospital and long-term outcomes were similar between the groups. However, since this is a study of retrospective nature, with a small number of patients enrolled and restricted to a single center, larger databases or registries, or, ideally, multicenter and prospective studies are needed to corroborate our findings and explore additional questions, as discussed in the main text of the paper.

Another well-summarized issue is the heterogeneity in the literature regarding the method and timing of QTc measurement. Also, long QT has slightly different definitions in the literature, as the cut-off value for prolonged QTc is not universally accepted and also depends on the measuring method, correction formula, age, and sex. In this retrospective study, at least one standard 12-lead electrocardiogram (ECG) was recorded for every patient at admission and, depending on the clinical course repeated one or several times during hospitalization. The manual measurements were performed in the ECG and lead that displayed the longest QT for each patient (on average, this ECG was the one performed on the second day after diagnosis) and, in patients in whom follow-up was possible, during the first follow-up visit (usually within 1 to 3 months after discharge). We recognized this method is not homogeneous across studies and other approaches would be possible.

Larger studies would allow a deeper analysis of other variables that may be involved in the emergence of arrhythmias and other complications during TTS events and in the long term.

We thank Dr. Madias again, whose additional inputs highlighted aspects that are still conflicting in literature and raised very pertinent questions about the topic and constitute valuable ideas for future analyses and works related to this subject.

References

1. Madias JE. Comments on "QT interval prolongation in Takotsubo syndrome: a frightening feature with no major prognostic impact". Monaldi Arch Chest Dis 2025;95:2879.
2. Pinho AI, Oliveira C, Santos LD, et al. QT interval prolongation in Takotsubo syndrome: a frightening feature with no major prognostic impact. Monaldi Arch Chest Dis 2024;94:2834.

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