LETTER TO THE EDITOR

Response to letter of the editor “Mortality in Takotsubo Cardiomyopathy should also be accounted based on predisposing etiology”

Dear Editor,

We appreciate the authors' comments on our previous publication (Prasitlumkum et al., 2019). In addition to emerging atrial fibrillation (AF) as an outcome predictor of takotsubo (TC), we agree with the authors that other factors especially etiologies of TC (physical or emotional) could potentially play a role. It would be of particular interest to assess physical TC as a predictor of TC outcome.

Our study's objective was to determine whether the presence of AF was associated with higher risk of mortality in TC patients. Only five studies (Dib et al., 2008; El-Battrawy et al., 2017; Ghadri et al., 2016; Song et al., 2010; Stiermaier et al., 2017) were included according to our strict inclusion and exclusion criteria. No study provided adequate information regarding physical or emotional TC as a predictor of mortality outcome in TC patients with AF. Therefore, we unfortunately were not able to perform subgroup analysis to evaluate physical TC as a predictor for the mortality and we were unable to perform meta-regression to address physical TC as a confounder in our study results as the authors suggested. We agree with the authors that it is important to address physical TC as another mortality predictor. More studies are warranted to further investigate in order to grant AF as an independent risk factor for mortality.

Numerous factors have been found to be associated with adverse outcomes in TC patients such as age, cancer, and chronic obstructive pulmonary disease (Kim et al., 2018). Our study also designated a probable risk factor, “AF,” which nevertheless may need more studies to establish an adjusted independent association (Prasitlumkum et al., 2019). As the authors mentioned in the letter to the editor, burdens of atrial arrhythmia could be more prevalent in patients with secondary TC due to their comorbidities. Arrigo, Bettex, and Rudiger (2014) reported various AF prevalence from 6% to 20% in acutely ill patients, compared with 2 to 9% in the general population (January et al., 2014). The aforementioned studies may support the assumption that higher rates of atrial arrhythmias in secondary forms of TC were due to an associated higher comorbidity potential and thus increased mortality. AF might be a confounder among patients with secondary TC whose mortality prognosis is likely driven by the underlying disease (Nunez-Gil et al., 2016). However, we were not able to prove this assumption given inadequate information and insufficient raw data provided in the included studies. This is one of the limitations of our study.

In conclusion, the association between AF and mortality demonstrated in our study could be confounded by underlying comorbidities in patients with secondary TC. Included studies in our meta-analysis reported inadequate information and insufficient raw data to proceed with subgroup and meta-regression analysis. It would be of great interest to conduct further cohort analysis to clarify this conundrum.

CONFLICT OF INTEREST

None.

Narut Prasitlumkum¹
Pattara Rattanawong^{1,2}

¹University of Hawaii Internal Medicine Residency Program, Honolulu, Hawaii

²Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, Thailand

Correspondence

Narut Prasitlumkum, University of Hawaii internal medicine residency Program, 1356 Lusitana Street, Honolulu, HI 96813.
Email: narutpra@hawaii.edu

ORCID

Narut Prasitlumkum <https://orcid.org/0000-0002-7956-0574>

Pattara Rattanawong <https://orcid.org/0000-0001-9419-5854>

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