



Letter to the Editor

Sex disparities and microvascular dysfunction

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To the Editor:

We immensely enjoyed the article by Coutinho et al. in the recent issue of International Journal of Cardiology [1]. The authors provide valuable insights into the spectrum of microvascular abnormalities and sex disparities in patients with chest pain and non-obstructive epicardial coronary disease. Specifically, the authors note that lower indexed arterial compliance was associated with lower myocardial flow reserve in women which subsequently translates into microvascular dysfunction and adverse cardiovascular outcomes.

An intriguing similarity exists among patients with Takotsubo syndrome (TTS). A fundamental pathophysiologic mechanism with TTS is microcirculatory dysfunction. Several invasive and non-invasive modalities have demonstrated myocardial perfusion defects in the acute phase of TTS with resolution in the recovery phase. These include abnormal coronary flow velocity reserve with intracoronary Doppler guidewire or real-time myocardial contrast echocardiography, short

diastolic deceleration time, reduced Thrombolysis in Myocardial Infarction (TIMI) frame count (TFC) and TIMI myocardial perfusion grade (TMPG), reduced apical uptake of F-18 fluorodeoxyglucose in positron-emission tomography (PET) studies and more recently, an abnormal quantitative flow ratio [2–5]. Given the preponderance of TTS in postmenopausal women it is probable that these patients acquire similar findings including lower arterial compliance, higher pulsatile arterial load, isolated systolic hypertension, and consequently microvascular dysfunction. Whether there were any patients identified with TTS in the present study who underwent microvascular function assessment with the ⁸²Rb PET study would offer important insight. An impactful area prime for further research would be an analysis of these parameters in the acute stage of TTS compared with follow-up.

Conflict of interest

None.

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