Sex differences in patients with takotsubo syndrome

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Introduction
Takotsubo syndrome (TTS) is an acute reversible left ventricular dysfunction which occurs mainly in postmenopausal women. Despite the fact that the most patients with TTS are postmenopausal women and the possible patomechanism is related to female hormones, including estrogens, men also suffer from TTS.

Objectives
The goal of this study was to compare course of disease and prognoses in male and female patients with TTS.

Patients and Methods
The analysis included 210 patients (192 women and 18 men) hospitalized at the academic hospital from the year 2006 to 2020.

Results
Physical stress was trigger of TTS more often in men than women (50 vs. 38%). There were no differences in the frequency of risk factors and comorbidities, with the exception of higher prevalence of smoking in men. Markers of cardiac necrosis were similar in both groups. At admission and peak NTproBNP levels were significantly more elevated in women (1527 vs. 3152 and 3752 vs. 5079 pg/ml, respectively). ST depression was found more frequently in men than in women (22 vs. 5%). Ejection fraction was lower among male patients at discharge (50 vs. 60%), despite the same length of hospitalization. Beta-adrenolytics and statins were more frequently prescribed for women than for men (90 vs 78% and 68 vs. 31%) whereas ACEI was prescribed in 96% men and 79% women. Moreover, there was P2Y12 inhibitors were more often used in men (33 vs 10.4%). In-hospital complications (arrhythmias, mechanical complications, cardiogenic shock) were similar in both groups. However, mortality rate was higher in women (3 vs. 0%).

Conclusions
Clinical course in patients with TTS is similar in women and men. However, in-hospital mortality was higher in women.