Age-Related Variations in Takotsubo Syndrome

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Abstract
BACKGROUND: Takotsubo syndrome (TTS) occurs predominantly in post-menopausal women but is also found in younger patients.

OBJECTIVES: This study aimed to investigate age-related differences in TTS.

METHODS: Patients diagnosed with TTS and enrolled in the International Takotsubo Registry between January 2011 and February 2017 were included in this analysis and were stratified by age (younger: ≤50 years, middle-age: 51 to 74 years, elderly: ≥75 years). Baseline characteristics, hospital course, as well as short- and long-term mortality were compared among groups.

RESULTS
Of 2,098 TTS patients, 242 (11.5%) patients were ≤50 years of age, 1,194 (56.9%) were 51 to 74 years of age, and 662 (31.6%) were ≥75 years of age. Younger patients were more often men (12.4% vs. 10.9% vs. 6.3%; p = 0.002) and had an increased prevalence of acute neurological (16.3% vs. 8.4% vs. 8.8%; p = 0.001) or psychiatric disorders (14.1% vs. 10.3% vs. 5.6%; p < 0.001) compared with middle-aged and elderly TTS patients. Furthermore, younger patients had more often cardiogenic shock (15.3% vs. 9.1% vs. 8.1%; p = 0.004) and had a numerically higher in-hospital mortality (6.6% vs. 3.6% vs. 5.1%; p = 0.07). At multivariable analysis, younger (odds ratio: 1.60; 95% confidence interval: 0.86 to 3.01; p = 0.14) and older age (odds ratio: 1.09; 95% confidence interval: 0.66 to 1.80; p = 0.75) were not independently associated
with in-hospital mortality using the middle-aged group as a reference. There were no
differences in 60-day mortality rates among groups.

CONCLUSIONS
A substantial proportion of TTS patients are younger than 50 years of age. TTS is associated
with severe complications requiring intensive care, particularly in younger patients.

Keywords
Age, broken, heart, syndrome, outcome, Takotsubo, syndrome