



Clinical Outcomes and Gender-Based Differences Among Coronary Artery Vasospasm Patients: 30-day and One-year Outcomes Analysis



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BACKGROUND

- Coronary artery vasospasm (CAVS) can complicate as acute myocardial infarction (AMI), ventricular tachycardia/fibrillation (VT/VF), or death.
- Clinical outcomes and gender difference among these patients is not well known due to paucity of data.
- We aim to study clinical outcomes among CAVS patients and to identify any gender-related differences in outcomes.

METHODS

- Patients aged >18 years who suffered CAVS were identified from TriNetX, an electronic medical database.
- Male patients were compared with females after propensity score matching.
- All-cause mortality as primary, while the rate of AMI, VT/VF, implantable cardioverter device placement (ICD) and percutaneous coronary intervention (PCI) as secondary at 30-day and one-year were studied.
- Kaplan Meier curves (log-rank $p < 0.05$ as significant) and Cox-proportional Hazard ratio were calculated.

RESULTS

- Our study included 18,151 CAVS patients with mean age of 65 ± 12 years, 60% male and 62% Caucasian.
- 1:1 matching based on age, hypertension, diabetes mellitus, atrial fibrillation, and stroke, extracted 14,336 patients for analysis.
- At 30-days, there was no difference in mortality (1.2% vs 1.1%, log-rank $p = 0.8$; hazard ratio (HR) = 1.01 [95% confidence interval CI: 0.77, 1.45]), VT/VF (2.2% vs 1.8%, $p = 0.05$; HR = 1.27 [0.99, 1.60]), rate of AMI (13.9% vs 14.1%, $p = 0.61$; HR = 0.96 [0.89, 1.10]), PCI (2.4% vs 2.2%, $p = 0.4$; HR = 1.10 [0.88, 1.38]) among the two groups, however males were more likely to receive ICD (1.3% vs 0.8%, $p = 0.027$; HR = 1.44 [1.04, 1.99]).
- At one-year, mortality (4.7% vs 4.2%, $p = 0.16$; HR = 1.13 [0.96, 1.34]) and AMI (23.1% vs 24.4%, $p = 0.14$; HR = 0.97 [0.88, 1.02]) were similar in the two groups, however males were more likely to suffer VT/VF (5.6% vs 3.7%, $p < 0.001$; HR = 1.5 [1.28, 1.77]), receive ICD (3.7% vs 2.7%, $p = 0.002$; HR = 1.36 [1.12, 1.67]) and undergo PCI (7.1% vs 5.7%, $p = 0.003$; HR = 1.23 [1.1, 1.42]).

Coronary artery vasospasm can complicate as acute myocardial infarction, ventricular fibrillation/tachycardia or death.

At one year, males are more likely to suffer VT/VF, receive an ICD and undergo PCI.

CONCLUSION

- Our study reports no gender-based differences in 30-day and one-year mortality among coronary artery vasospasm patients.
- At one-year, males are more likely to suffer VT/VF, receive an ICD and undergo PCI.
- These results provide us an insight about the clinical course of this disease entity, generates hypothesis for future research and identifying that males are at an elevated risk of requiring further interventions.

DISCLOSURE INFORMATION

Author Beni Verma is a Consultant with Roche. No disclosures for the rest of the authors