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## Ischemic Heart Disease

### IMPACT OF ISCHEMIC HEART DISEASE ON OUTCOMES IN PATIENTS WITH ACUTE RESPIRATORY DISTRESS SYNDROME

Poster Contributions

For exact presentation time, refer to the online ACC.22 Program Planner at <https://www.abstractsonline.com/pp8/#!/10461>

Session Title: Ischemic Heart Disease Flatboard Poster Selections: Special Populations

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**Background:** Respiratory failure occurs in over one-third of admissions to the modern cardiac intensive care unit and is associated with substantial morbidity and mortality. Acute respiratory distress syndrome (ARDS) represents a particularly severe form of respiratory failure, but patients with cardiovascular disease are often excluded from or poorly represented in clinical trials. As a result, little is known about the impact of ischemic heart disease (IHD) in this population.

**Methods:** We sought to assess the association between IHD and clinical outcomes in patients with ARDS. Participants from four ARDS Network randomized controlled trials with shared study criteria, definitions, and endpoints were included. Using multivariable logistic regression, we assessed for the association between IHD and clinical outcomes. The primary outcome was 60-day mortality. Secondary outcomes included 90-day mortality, 28-day ventilator-free days, and 28-day organ failure.

**Results:** Among 1,909 patients, 102 (5.4%) had a history of IHD. Patients with IHD were more likely to be older, male, and have other cardiovascular comorbidities (all,  $P < 0.05$ ). Non-cardiac comorbidities, severity of illness scores, and other markers of ARDS severity were not different between groups (all,  $P > 0.05$ ). Patients with IHD had a higher 60-day (39.2% vs. 23.3%,  $P < 0.001$ ) and 90-day (40.2% vs. 24.0%,  $P < 0.001$ ) mortality, and experienced more frequent renal (45.1% vs. 32%,  $P = 0.006$ ) and hepatic (35.3% vs. 25.2%,  $P = 0.023$ ) failure. After multivariable adjustment, 60-day (Odds ratio [OR] 1.76; 95% Confidence interval [CI]: 1.07-2.89,  $P = 0.025$ ) and 90-day (OR 1.74; 95% CI: 1.06-2.85,  $P = 0.028$ ) mortality remained higher. These results persisted in a sensitivity analysis including only patients  $\geq 50$  years of age. Comorbid IHD was associated with 10% fewer ventilator-free days by day 28 (Incidence rate ratio 0.90; 95% CI: 0.85-0.96,  $P = 0.001$ ).

**Conclusion:** Comorbid IHD was associated with higher mortality and fewer ventilator-free days in patients with ARDS. These findings highlight the need for future studies to identify predictors of mortality and improve treatment paradigms in this growing subgroup of critically ill patients.