Racial and Sex Differences in Surgical Aortic Valve Replacement (SAVR)
Short-Term Post-Operative Outcomes at a High-Volume Cardiac Surgery Center
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Background
- Over 600,000 Americans die each year from cardiovascular disease.  
- Up to 1.5 million people suffer from Aortic Stenosis (AS), narrowing of the main artery of the heart.  
- AS, even treated, has poor prognosis, compared to other diseases.

Major Findings

What is SAVR?
Surgical procedure to replace the aortic valve to restore normal blood flow

Characteristics
Black vs. White Males
- Adjusted Geometric Means Ratio
- p-value
- Postoperative ventilator hours, mean (CL): 1.184 (1.016 - 1.380) 0.97
- Postoperative length of stay, mean (CL): 1.119 (1.012 - 1.237) 0.25
- ICU, h: 1.124 (1.055 - 1.198) 0.16
- Operation to Discharge

Characteristics
Black vs. White Females
- Adjusted Geometric Means Ratio
- p-value
- Postoperative ventilator hours, mean (CL): 1.189 (1.001 - 1.413) 0.97
- Postoperative length of stay, mean (CL): 1.038 (0.977 - 1.128) 0.16
- ICU, h: 1.050 (0.977 - 1.128) 0.25
- Operation to Discharge

% Difference in Length of Hospital Stay

Public Health Concern

Selected References

Acknowledgement

Discussion
- In crude analyses, African American group had significantly:
  - More deaths within 30 days of SAVR
  - Additional postoperative stroke
  - Additional ventilation use
  - Longer ICU stay

- In adjusted analyses, taking all factors in consideration, significance is lost

- Why?

- STS-PROM (Predictor of 30-day Mortality) correlates with prolonged length of post-operative stay

- Extended care given to black patients may contribute to:
  - Lowering the 30-day mortality rate
  - Loss of significance in adjusted analyses

- Further studies on Survival Analysis measuring Time to Discharge with Competing Risk of Death is warranted

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