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VALVULAR HEART DISEASE

THE RISK IN PREDICTING OUTCOMES FOR OCTOGENARIANS UNDERGOING AORTIC VALVE REPLACEMENT

ACC Poster Contributions

Ernest N. Morial Convention Center, Hall F

Monday, April 04, 2011, 9:30 a.m.-10:45 a.m.

Session Title: Valvular Disease- Defining Valvular Heart Disease- Epidemiologic Criteria

Abstract Category: 19. Valvular Disease

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Background: Aortic valve replacements (AVR) alone and with coronary bypass surgery (AVR/CABG) are increasingly performed in octogenarians. Excluding elderly patients from conventional surgery based on predictive risk algorithms only is detrimental. The objective of this study was to determine the predictive value of risk algorithms on early and late outcomes in this select group of patients.

Methods: Between 1999 and 2009, 394 octogenarians underwent AVR (178, 45%) or AVR/CABG (216, 55%) at our institution. Mean age was 83 +/- 3 yrs; 209 (53%) were male. The expected hospital mortality was calculated using the STS predictive risk of mortality (STS) and Logistic EuroSCORE (LES) algorithms. These scores were further divided into low (STS<5.0%, LES <10%), medium (STS 5-10%, LES 11-20%) and high (STS>10%, LES>20%) risk groups. Mean follow-up was 4.7 yrs (1699 patient-years). Parametric and non-parametric analyses were used to determine predictors of outcomes. Observed over expected (O/E) ratios were calculated.

Results: Hospital mortality was 32 of 395 (8.1%, AVR 7.3%, AVR/CABG 8.8%, P=.5). Mean expected mortality was 6.5% (STS, O/E=1.25) and 14.3% (LES, O/E=0.56). Mean STS expected mortality in low, medium and high risk patients was respectively 3.3% (O/E=2.3), 6.8% (O/E=1.0) and 14.6% (O/E=0.76); mean expected LES mortality in low, medium and high risk was respectively 8.1% (O/E=0.61), 14.3% (O/E=0.70) and 31.9% (O/E=0.49). Predictors of hospital mortality included CHF, low cardiac output state, prolonged ventilation and previous CVA (P<.05); predictors of late mortality were CAD, postoperative CVA and COPD (P<.05). STS and LES scores did not predict early or late mortality. One, 5 and 10-yr survival was respectively 95%, 80% and 61%.

Conclusions: The STS risk score most closely approximates observed hospital mortality rates at different levels of risk while LES scores overestimated them; neither predicted outcomes. In view of current surgical results and encouraging survival, octogenarians should not be deprived of surgery based on predictive risk assessment alone.