VALVULAR HEART DISEASE

PREOPERATIVE INDEXED LEFT VENTRICULAR DIMENSIONS TO PREDICT PROGNOSIS AFTER AORTIC VALVE REPLACEMENT FOR CHRONIC AORTIC REGURGITATION

ACC Poster Contributions
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Background: The objective of this study is to determine the benefits of the preoperative body surface area indexed LV size to predict the prognosis after AVR for chronic severe AR.

Methods: Between 1994 and 2009, 118 patients (52.9±13.9 yrs, male 84) underwent AVR for severe chronic AR. Forty-two patients have LV systolic dysfunction (EF<50%) or severe LV dilatation. Primary end-point was total mortality. Mean follow-up of 6.6±4.2 years.

Results: The mean preoperative EF, LVESD, indexed LVESD and indexed LVEDD were 53.5±8.9%, 45.8±7.9 mm, 67.2±7.3 mm, 27.4±5.8 mm/m2 and 40.1±5.4 mm/m2. Total mortality was 6.7%. LVESD and LVEDD were significantly decreased early after AVR (45.8±7.9 vs 32.9±6.2 mm, and 67.1±7.3 vs 51.6±5.3 mm, respectively). The level of EF preoperatively did not predict late survival, neither did LVESD and LVEDD. Indexed LVESD and LVEDD were predictors of late survival (p<0.05).

Preoperative EF, LVESD, indexed LVESD, LVEDD, and indexed LVEDD were univariately predictive of late EF. Multivariate stepwise regression analysis revealed that preoperative indexed LVESD and LVEDD were independent predictors of the recovery of LV systolic function after AVR.

Conclusions: In patients who received AVR for severe chronic AR, decreased EF and increased LV dimensions were not associated with late mortality. However, larger indexed LVESD and LVEDD were associated with late mortality. Smaller indexed LVESD and LVEDD were associated with early restoration of LV systolic function.