



Valvular Heart Disease

PROGNOSTIC VALUE OF RIGHT VENTRICLE-PULMONARY ARTERY COUPLING IN TAVR PATIENTS: TIME TO INTEGRATE THE RIGHT SIDE UNIT

Moderated Poster Contributions
Valvular Heart Disease Moderated Poster Theater, Poster Hall, Hall C
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Background: Right ventricular (RV) function and pulmonary hypertension (PH) are prognostically important in patients receiving transcatheter aortic valve replacement (TAVR). We hypothesized that the ratio between tricuspid annular plane systolic excursion (TAPSE)-pulmonary artery systolic pressure (PASP) would assess the RV-arterial coupling and would have superior prognostic value than either parameter alone.

Methods: Consecutive TAVR patients from 07/2011 through 01/2016 with comprehensive echocardiogram at baseline. TAPSE/PASP quartiles were tested for the prediction of all-cause mortality. Cox regression and Kaplan-Meier analyses with TAPSE and PASP and then combined as the ratio were performed. Akaike information criterion (AIC) compared relative quality of the prediction models.

Results: A total of 457 patients [age 84 years, LVEF 54 ± 13%, PASP 44 ± 17 mmHg] were included. TAPSE/PASP quartiles showed a dose-response relationship with survival (Figure). This remained significant (HR for lowest quartile vs. highest quartile=2.32, 95% CI 1.16-4.64, p=0.02) after adjusting for age, LVEF, and STS-PROM. Comparison of model AIC statistics showed that the TAPSE/PASP ratio was a better predictor than either measurement by itself."

Conclusions: Assessment of the RV-pulmonary artery coupling as the TAPSE/PASP ratio predicts all-cause mortality in TAVR patients. Incorporation of right-side unit into the risk stratification might provide strategies to further improve TAVR outcomes.

TAPSE/PASP RATIO AND ALL-CAUSE MORTALITY

