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TRICUSPID VALVE DISEASE AND RIGHT VENTRICULAR DYSFUNCTION AFTER RIGHT VENTRICULAR TRANSVENOUS LEAD PLACEMENT IN PATIENTS WITH TRICUSPID VALVE PROSTHESIS

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Valvular Heart Disease

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Background: First time transvenous right ventricular (RV) lead implant after tricuspid valve (TV) repair or bioprosthetic replacement is common. We evaluated outcomes in TV regurgitation (TR) and RV function in this population.

Methods: We conducted single-center retrospective study on patients with TV repair or replacement from 2000 to 2020 followed by first-time transvenous RV lead implant. Primary outcomes were change in TR severity (defined as defined as none/trivial, mild, moderate, moderate-severe, or severe) and RV function (normal, mild, moderate, or severe). Baseline and follow-up echocardiogram (ECHO) data was reviewed, as well as time to death.

Results: 52 patients were identified (29 female, 47 had hypertension, 41 had atrial fibrillation, 49 had TV repair, 3 had replacement). Median time from surgery to implant was 1.7 months and to last ECHO was 39.7 months. In TV repair, baseline TR was none/trivial in 15 (30.6%) and mild in 21 (42.8%) patients. RV function was normal in 33 (67.3%) patients. 58% had worsened TR (mean 0.9 levels) (Figure). No TR change was seen in TV replacement. Mean worsening RV function was by 0.9 levels. There was statistically significant correlation with RV pacing and RV dysfunction (Spearman correlation coefficient 0.37, p = 0.017), but not with change in TR (p = 0.36). 22 patients died at median follow-up (48.9 months).

Conclusion: Presence of an RV lead after TV repair correlated with worsening TR. Higher RV pacing level correlated with RV dysfunction but not TR severity.

DISTRIBUTION OF THE BASELINE TO FOLLOW-UP CHANGE IN TR SEVERITY