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## Comparison between mitral valve and concomitant mitral with tricuspid valve operations: A retrospective analysis

Steven T Leung

Wake Forest Baptist Medical Center, USA

**Background:** Differences in opinion for the treatment of tricuspid regurgitation secondary to mitral regurgitation exist. This study compares the mortality and morbidity of concomitant mitral and tricuspid valve operations to mitral valve operations alone.

**Methods:** Between 2004 and 2012, 153 mitral valve operations were performed. In this group, 130 patients (age, 58.2±13.6) underwent mitral valve repair only, and 23 patients (age, 70.6±7.7) underwent joint mitral and tricuspid valve repairs. The results between these two groups were compared using Pearson's chi-square and propensity score analyses.

**Results:** Patients undergoing combined valve operations were more elderly (ages 58.2 vs 70.6,  $p<0.001$ ), and more commonly female (73.9% vs 44.6%,  $p=0.010$ ). When performing Pearson chi-squared test, the combined valvular operation group had a similar operative mortality (0.0% vs 1.5%, higher incidence of prolonged ventilation (30.4% vs 11.5%,  $p=0.017$ ), and higher postoperative length of stay (9.7 days vs 6.4 days,  $p=0.039$ ). On the contrary, there were no statistically significant differences in major complications

rate (43.5% vs 16.2%,  $p=0.103$ ) or aortic cross-clamp time (114.9 min vs 119.7 min,  $p=0.566$ ) between the two groups. However, due to the disparity between our two groups, propensity score analyses were also performed, which did not demonstrate any differences between outcomes measured in this study.

**Conclusions:** The postoperative mortality and morbidity is similar between patients undergoing mitral valve repair only and patients undergoing mitral and tricuspid valve repairs. Given the decreased quality of life from progressing tricuspid regurgitation and similar postoperative mortality and morbidity rates, a concomitant valvular procedure is a reasonable approach for selected patients with severe tricuspid regurgitation secondary to mitral valve pathology.

### Speaker Biography

Steven T Leung has completed his graduation with the MBBS degree in 2013 from the University of Queensland, Australia. Since then, he has completed his internship in General Surgery at the Mayo Clinic, and his PGY-2 year at the University of Florida. He is currently a Research Fellow with the Department of Surgery at Wake Forest Baptist Health. He plans to complete his residency in General Surgery, and pursue a fellowship in Cardiothoracic Surgery.

e: sleung@wakehealth.edu

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