

SUPPLEMENTARY MATERIAL**Table 1.** Comparison of complications between repair and prosthesis groups

| | Repair | Prosthesis | Significance |
|--|--------|------------|--------------|
| EARLY COMPLICATIONS | | | |
| <i>De novo atrial fibrillation (%)</i> | 9.8 | 10.4 | 0.14 |
| Acute myocardial infarction(%) | 4.9 | 6.7 | 0.62 |
| Ischemic stroke (%) | 3.2 | 6.7 | 0.47 |
| Heart failure (%) | 11.5 | 13.3 | 0.52 |
| Pericardial effusion (%) | 13.1 | 6.7 | 0.47 |
| Kidney failure (%) | 37.7 | 53.3 | 0.17 |
| Death (%) | 2.2 | 6.7 | 0.27 |
| LATE COMPLICATIONS | | | |
| <i>De novo atrial fibrillation (%)</i> | 9.5 | 6.7 | 0.6 |
| Acute myocardial infarction(%) | 1.6 | 6.7 | 0.73 |
| Ischemic stroke (%) | 1.6 | 6.7 | 0.7 |
| Heart failure (%) | 15.9 | 28.6 | 0.24 |

| | | | |
|---------------------------|------|------|------|
| Pericardial effusion (%) | 3.2 | 6.7 | 0.38 |
| Kidney failure (%) | 8.6 | 13.3 | 0.53 |
| Pacemaker implantation(%) | 14.3 | 20 | 0.07 |
| Death (%) | 2.3 | 6.7 | 0.47 |

Table 2: Quantitative variables associated with TR outcome

| TR outcome | | Mean | P |
|-------------------------------------|-------------|---------|------|
| Maximum aortic gradient | Unfavorable | 15.33 | 0,52 |
| | Favorable | 19.55 | |
| Mean aortic gradient | Unfavorable | 8.00 | 0,37 |
| | Favorable | 11.7 | |
| Left ventricle diameter | Unfavorable | 51.17 | 0,65 |
| | Favorable | 49.79 | |
| Left ventricle end-diastolic volume | Unfavorable | 99.00 | 0,92 |
| | Favorable | 100.57 | |
| Left ventricle end-systolic volume | Unfavorable | 43.0000 | 0,83 |
| | Favorable | 45.1481 | |
| LVEF (biplane Simpson) | Unfavorable | 62.33 | 0,35 |
| | Favorable | 58.71 | |
| Ejection volume | Unfavorable | 58,5 | 0,73 |
| | Favorable | 55,47 | |
| Lateral annulus systolic velocity | Unfavorable | .0800 | 0,68 |
| | Favorable | .0755 | |
| Medial annulus systolic velocity | Unfavorable | .0580 | 0,91 |
| | Favorable | .0572 | |
| Mitral filling E wave | Unfavorable | 1,306 | 0,17 |
| | Favorable | 1,703 | |
| Left biplane atrial volume | Unfavorable | 91.0406 | 0,3 |
| | Favorable | 80.1567 | |
| Left atrial longitudinal diameter | Unfavorable | 55.67 | 0,4 |
| | Favorable | 52.55 | |
| E/A ratio | Unfavorable | 10 | 0,4 |
| | Favorable | 14,68 | |
| E/e' ratio | Unfavorable | 12.8 | 0,23 |
| | Favorable | 19.61 | |
| Tricuspid mean gradient | Unfavorable | 2.33 | 0,95 |
| | Favorable | 2.38 | |
| Vena contracta | Unfavorable | 7 | 0,44 |
| | Favorable | 8.21 | |
| PISA radius | Unfavorable | 7 75 | 0,94 |
| | Favorable | 7.63 | |
| Regurgitating volume | Unfavorable | 49.33 | 0,67 |
| | Favorable | 44.29 | |
| Tricuspid annulus diameter | Unfavorable | 42.83 | 0,52 |
| | Favorable | 41.65 | |
| Tenting area | Unfavorable | 2.24 | 0,41 |
| | Favorable | 1.61 | |
| Tenting distance | Unfavorable | 8,83 | 0,38 |

| | | | |
|-------------------------------------|-------------|---------|------|
| | Favorable | 7.4962 | |
| Right ventricle basal diameter | Unfavorable | 50.33 | 0.7 |
| | Favorable | 49.00 | |
| Right ventricle mid diameter | Unfavorable | 39.50 | 0.67 |
| | Favorable | 37.91 | |
| Right ventricle fraction shortening | Unfavorable | 49.5 | 0.07 |
| | Favorable | 38.77 | |
| TAPSE | Unfavorable | 22.50 | 0.05 |
| | Favorable | 18.71 | |
| Tricuspid annulus systolic velocity | Unfavorable | .1233 | 0.39 |
| | Favorable | .1115 | |
| Lateral wall longitudinal strain | Unfavorable | -23.25 | 0.13 |
| | Favorable | -19.44 | |
| Right atrial longitudinal diameter | Unfavorable | 71.00 | 0.99 |
| | Favorable | 71.06 | |
| Right atrial transverse diameter | Unfavorable | 52.20 | 0.87 |
| | Favorable | 53.20 | |
| Right biplane atrial volume | Unfavorable | 64.5914 | 0.66 |
| | Favorable | 74.8892 | |
| Inferior vena cava diameter | Unfavorable | 26.40 | 0.26 |
| | Favorable | 22.11 | |
| RV-RA gradient | Unfavorable | 32.83 | 0.46 |
| | Favorable | 37.24 | |
| Systolic pulmonary artery pressure | Unfavorable | 52.00 | 0.94 |
| | Favorable | 51.51 | |
| Right atrial pressure | Unfavorable | 14.00 | 0.4 |
| | Favorable | 12.78 | |

TR: tricuspid regurgitation; LVEF: left ventricular ejection fraction, PISA: proximal isovelocity surface area;

TAPSE: tricuspid annular plane systolic excursion; RV: right ventricle; RA: right atrium

Table 3: Qualitative variables associated with TR outcome

| TR outcome | | Percentage | P |
|--|-------------|------------|------|
| Sex (female) | Unfavorable | 83.3% | 0,54 |
| | Favorable | 74.50% | |
| Hypertension | Unfavorable | 83.30% | 0,14 |
| | Favorable | 50.90% | |
| Previous stroke | Unfavorable | 33.30% | 0,17 |
| | Favorable | 10.90% | |
| Previous ischemic heart disease | Unfavorable | 16.70% | 0,7 |
| | Favorable | 7.30% | |
| Previous right ventricular function (normal by visual estimation) | Unfavorable | 66.70% | 0,15 |
| | Favorable | 83.60% | |
| Diabetes mellitus | Unfavorable | 0.00% | 0,29 |
| | Favorable | 20.00% | |
| COPD | Unfavorable | 33.30% | 0,1 |
| | Favorable | 7.30% | |
| Previous left ventricular function (normal) | Unfavorable | 83.30% | 0,9 |
| | Favorable | 85.50% | |
| Previous atrial fibrillation | Unfavorable | 33.30% | 0,63 |
| | Favorable | 18.20% | |
| Previous heart valve prosthesis | Unfavorable | 16.70% | 0,8 |
| | Favorable | 32.70% | |
| Right heart failure | Unfavorable | 50.00% | 0,55 |
| | Favorable | 43.60% | |
| Tricuspid regurgitation etiology | Unfavorable | 100.00% | 0,54 |
| | Favorable | 73.60% | |

TR: tricuspid regurgitation; COPD: chronic obstructive pulmonary disease

Table 4: Early mortality predictors. Multivariate analysis.

| Early mortality predictors | OR | CI (95%) | P |
|----------------------------|------|-------------|------|
| LVEF (biplane Simpson) | 0.81 | 0.676-0.985 | 0,03 |
| Clamping time (min) | 1.24 | | 0,72 |
| EUROSCORE | 1.49 | | 0,78 |
| Hypertension | 1.19 | | 0,22 |
| Stroke | 1.6 | | 0,41 |
| Coronary heart disease | 1.2 | | 0,68 |
| Constant | 2.62 | | 0,77 |

LVEF: left ventricular ejection fraction

Table 5: Late mortality predictors. Multivariate analysis.

| Late mortality predictors | OR | CI (95%) | P |
|---------------------------|-------|-------------|------|
| LVEF (biplane Simpson) | 0.025 | 0.657-0.841 | 0,01 |
| Follow-up complications | 1.41 | | 0,82 |
| Hypertension | 1.83 | | 0,38 |
| Stroke | 2.42 | | 0,21 |
| Coronary heart disease | 1.1 | | 0,47 |
| Constant | 2 | | 0,57 |

LVEF: left ventricular ejection fraction

Table 6: Tricuspid regurgitation predictors. Multivariate analysis.

| TR predictors | OR | P |
|--|-------|------|
| LVEF (biplane Simpson) | .000 | ,984 |
| Tenting area | .480 | ,488 |
| Tenting distance | .612 | ,434 |
| TAPSE | .037 | ,847 |
| Tricuspid lateral systolic peak S' wave velocity | .071 | ,790 |
| Right ventricular strain | .567 | ,452 |
| RVEF by visual estimation | .490 | ,484 |
| Tricuspid regurgitation etiology | .782 | ,676 |
| PISA radius | 1.339 | ,247 |
| Regurgitating volume | .673 | ,412 |
| Regurgitant orifice | 2.482 | ,115 |

LVEF:left ventricular ejectionfraction; RVEF: right ventricular ejectionfraction; TAPSE: tricuspid annular plane systolic excursion; PISA: proximal isovelocity surface area ; TR: tricuspid regurgitation.