**ONLINE SUPPLEMENT**

Table S1. The differences of left atrial volumes, strain, and left ventricular strain between patients with normal and reduced stroke volume index

|  |  |  |  |
| --- | --- | --- | --- |
|   | **Pre-TAVI SVi <35 mL/m2** | **Pre-TAVI SVi >35 mL/m2** |   |
|   | *Mean* | *STD* | *Mean* | *STD* | *P-value* |
| LV Global Strain (%) | -17.1 | 5.0 | -19.6 | 4.7 | 0.002 |
| LA Global Strain (%) | 21.1 | 10.3 | 22.6 | 8.6 | 0.34 |
| LA Area index(cm2/m2) | 12.3 | 2.9 | 12.3 | 2.5 | 0.99 |
| LAVmax index (mL/m2)  | 44.0 | 13.1 | 40.7 | 11.1 | 0.11 |
| LAVmin index (mL/m2)  | 26.1 | 11.2 | 24.0 | 8.8 | 0.22 |
| LA emptying fraction (%) | 45.4 | 12.8 | 46.5 | 11.8 | 0.62 |
| LA function index | 11.7 | 6.0 | 15.8 | 6.8 | <0.001 |
| LA vol reservoir phase(mL) | 33.6 | 9.5 | 30.1 | 10.2 | 0.03 |
| LA vol conduit phase (mL) | 21.7 | 11.5 | 47.7 | 17.8 | <0.001 |
| LA passive emptying vol(mL) | 17.6 | 7.4 | 14.6 | 8.3 | 0.03 |
| LA contractile vol(mL) | 16.1 | 7.1 | 15.5 | 6.6 | 0.59 |
| LA passive emptying fraction (%) | 21.7 | 7.9 | 19.7 | 8.3 | 0.15 |
| LA active emptying fraction (%) | 26.1 | 11.8 | 27.5 | 11.3 | 0.47 |
| LA expansion index (%) | 87.9 | 42.2 | 76.6 | 36.1 | 0.85 |
| LA stiffness | 1.72 | 2.47 | 1.29 | 1.53 | 0.24 |
| Systemic vascular resistance (dynes.sec.cm-5) | 1960 | 521 | 1547 | 478 | <0.001 |
| Systemic arterial compliance (ml/m2/mmHg) | 0.43 | 0.13 | 0.64 | 0.29 | <0.001 |
| Global afterload (mmHg/mL/m2)  | 6.3 | 1.2 | 4.4 | 0.9 | <0.001 |
| Effective arterial elastance (mmHg/mL) | 2.4 | 0.6 | 1.7 | 0.4 | <0.001 |

**ONLINE SUPPLEMENT**

Table S2. The association between the change in left atrial volume and LV systolic and diastolic parameters with LA strain, LV Strain and maximum volume

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Post-TAVI change** | **LA Strain improvement** |  | **LV Strain improvement** |  | **LA Maximum vol decrease** |
|  | *OR* | *LL* | *UL* |  | *OR* | *LL* | *UL* |  | *OR* | *LL* | *UL* |
| LAVmax  | 1.017 | 0.996 | 1.037 |  | 1.022 | 1.001 | 1.043 |  | n/a |  |  |
| LAVmin  | 1.014 | 0.983 | 1.046 |  | 1.017 | 0.986 | 1.049 |  | 0.782 | 0.718 | 0.852 |
| LAVpre-A  | 1.005 | 0.980 | 1.031 |  | 1.008 | 0.983 | 1.033 |  | 0.918 | 0.886 | 0.951 |
| Aortic mean gradient  | 0.972 | 0.945 | 1.000 |   | 1.013 | 0.988 | 1.038 |   | 1.005 | 0.981 | 1.029 |
| e' average  | 1.146 | 0.923 | 1.422 |   | 0.918 | 0.730 | 1.153 |   | 0.903 | 0.737 | 1.105 |
| E/A  | 0.828 | 0.321 | 2.135 |   | 0.964 | 0.380 | 2.444 |   | 0.604 | 0.227 | 1.604 |
| E/e'  | 0.938 | 0.884 | 0.996 |   | 0.996 | 0.949 | 1.045 |   | 1.020 | 0.971 | 1.072 |
| LVEF  | 1.012 | 0.980 | 1.046 |   | 0.992 | 0.959 | 1.025 |   | 1.009 | 0.977 | 1.042 |
| LV stroke volume  | 1.009 | 0.989 | 1.030 |   | 1.008 | 0.988 | 1.029 |   | 0.996 | 0.976 | 1.015 |