**Additional File**

Title : Left atrial phasic function remodeling during its enlargement: A two-dimensional speckle-tracking echocardiography study

Chuyun Chen, Ying Yang\*, Wei Ma, Litong Qi, Baowei Zhang, Yan Zhang

* **Table S1.** Associations of left atrial functional and structural characteristics in HT subgroup with normal LA size (n=389).
* **Figure S1.** 1:2 matching according to age, HT and CHD between Normal LA size group (16-34ml/ m2) and Severe LAE group (>48ml/ m2) (caliper width = 0.05).
* **Table S2.** Characteristics before and after Propensity Score-Matching according to age, HT and CHD between Normal LA size group and Severe LAE group.
* **Table S3.** Association of LA size with Strain in the Propensity Score-Matching Group (Normal LA size group and Severe LAE group).
* **Figure S2.** 1:1 matching according to age, HT and CHD between Normal LA size group (16-34ml/ m2) and Abnormal LA size group (Mild, Moderate and Severe LAE ) (>35ml/ m2) (caliper width = 0.05).
* **Table S4.** Characteristics before and after Propensity Score-Matching according to age, HT and CHD between Normal LA size group and Abnormal LA size group.
* **Table S5:** Association of LA size with Strain in the Propensity Score-Matched Group (Normal LA size group and Abnormal LA size group).

**Table S1:** Associations of left atrial functional and structural characteristics in HT subgroup with normal LA size (n=389).

|  |
| --- |
| Variables |
|  | Stot | Se |
|  | β | p | β | p |
| Age |  |  |  |  |
| Male |  |  |  |  |
| HR |  |  | -0.052 | 0.031 |
| DM |  |  |  |  |
| Smoking | -2.299 | 0.009 |  |  |
| Dyslipidemia |  |  |  |  |
| LAVI |  |  |  |  |
| LVSlong | 0.414 | <0.001 | 0.269 | 0.001 |
| E/A |  |  |  |  |
| E’ |  |  | 0.708 | <0.001 |
| A’ | 0.366 | 0.048 |  |  |
| LAEF | 12.513 | 0.003 | 6.919 | 0.022 |
| Adjusted R2 | 0.147 | 0.193 |

***HR*** Heart rate, ***DM*** Diabetes mellitus, ***LVSlong*** Left ventricle global longitudinal strain, ***LA*** left atrial ejection fraction

**Figure S1:** 1:2 matching according to age, HT and CHD between Normal LA size group (16-34ml/m2) and Severe LAE group (>48ml/m2) (caliper width = 0.01).



***LAE =1*** Severe LAE group (>48ml/m2), ***LAE =0*** Normal LA size group (16-34ml/m2).

**Table S2:** Characteristics before and after Propensity Score-Matching according to age, HT and CHD between Normal LA size group and Severe LAE group.

|  |  |  |
| --- | --- | --- |
|  | **Before Matching** | **After Matching** |
|  | Normal LA size(16-34ml/m2)(n=507) | Severe LAE(>48ml/m2)(n=23) | Standized Difference | Normal LA size(16-34ml/m2)(n=46) | Severe LAE(>48ml/m2)(n=23) | Standized Difference |
| Age (year) | 65.96±9.11 | 70.65±7.90 | 0.55 | 67.15±9.57 | 70.65±7.90 | 0.40 |
| HT | 76.73% | 82.61% | 0.15 | 69.60% | 82.60% | 0.31 |
| CHD | 7.50% | 13.40% | 0.18 | 13.00% | 13.00% | 0.00 |
| Stot | 21.74±5.97 | 17.75±4.71 | 0.74 | 22.16±6.39 | 17.75±4.71 | 0.79 |
| Se | 9.90±4.58 | 9.20±3.06 | 0.18 | 9.69±4.35 | 9.20±3.06 | 0.13 |
| Sa | 11.84±3.92 | 8.55±2.88 | 0.96 | 12.47±3.90 | 8.55±2.88 | 1.14 |

***HT*** Hypertension, ***CHD*** Coronary Heart Disease.

**Table S3:** Association of LA size with Strain in the Propensity Score-Matching Group (Normal LA size group and Severe LAE group).

|  |  |  |  |
| --- | --- | --- | --- |
| Group | Strain | **Before Matching** | **After Matching** |
| β (95%CI) | *P* | β (95%CI) | *P* |
| Normal LA size (16-34ml/m2) |  | ref | ref |
| Severe LAE (>48ml/m2) | Stot | -4.41 (-6.44, -2.38) | <0.001 | -3.92 (-6.03, -1.81) | <0.001 |
| Se | -0.49 (-2.06, 1.08) | 0.543 | 0.13 (-1.35, 1.60) | 0.867 |
| Sa | -3.92 (-5.14, -2.71) | <0.001 | -4.05 (-5.38, -2.72) | <0.001 |

Propensity score matching for age, hypertension(HT), and coronary heart disease (CHD).

**Figure S2:** 1:1 matching according to age, HT and CHD between Normal LA size group (16-34ml/m2) and Abnormal LA size group (Mild, Moderate and Severe LAE ) (>35ml/m2) (caliper width = 0.01).

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***LAE. =1*** Abnormal LA size group (>35ml/m2), ***LAE. =0*** Normal LA size group (16-34ml/m2).

**Table S4:** Characteristics before and after Propensity Score-Matching according to age, HT and CHD between Normal LA size group and Abnormal LA size group.

|  |  |  |
| --- | --- | --- |
|  | **Before Matching** | **After Matching** |
|  | Normal LA size(16-34ml/m2)(n=507) | Abnormal LA size(>35ml/m2) (n=208) | Standized Difference | Normal LA size(16-34ml/m2)(n=207) | Abnormal LA size(>35ml/m2) (n=207) | Standized Difference |
| Age (year) | 65.96±9.11 | 68.02±8.07 | 0.24 | 67.13±8.41 | 68.02±8.09 | 0.11 |
| HT | 76.73% | 88.94% | 0.33 | 86.00% | 88.90% | 0.09 |
| CHD | 7.50% | 12.98% | 0.18 | 14.00% | 12.60% | 0.04 |
| Stot | 21.74±5.97 | 20.35±5.09 | 0.25 | 20.84±5.88 | 20.36±5.10 | 0.09 |
| Se | 9.90±4.58 | 9.84±3.85 | 0.01 | 9.17±4.22 | 9.84±3.86 | 0.17 |
| Sa | 11.84±3.92 | 10.51±3.17 | 0.37 | 11.67±3.91 | 10.52±3.18 | 0.32 |

***HT*** Hypertension, ***CHD*** Coronary Heart Disease.

**Table S5:** Association of LA size with Strain in the Propensity Score-Matched Group (Normal LA size group and Abnormal LA size group).

|  |  |  |  |
| --- | --- | --- | --- |
| Group | Strain | **Before Matching** | **After Matching** |
| β (95%CI) | *P* | β (95%CI) | *P* |
| Normal LA size (16-34ml/m2) |  | ref | ref |
| Abnormal LA size (>35ml/m2) | Stot | -0.48 (-1.51, 0.56) | 0.367 | -0.37 (-1.40, 0.67) | 0.486 |
| Se | 0.67 (-0.07, 1.42) | 0.076 | 0.75 (0.01, 1.50) | 0.048 |
| Sa | -1.15 (-1.83, -0.48) | <0.001 | -1.12 (-1.79, -0.45) | 0.001 |

Propensity score matching for age, hypertension(HT), and coronary heart disease (CHD).