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ASSOCIATION BETWEEN RISK FACTORS AND LEFT VENTRICULAR REMODELLING IN MIDDLE-AGED AND GERIATRIC POPULATION: A COMMUNITY-BASED STUDY

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Instruction Left ventricular remodelling played a vital role in the progression of heart failure and contributed to the clinical and symptomatic deterioration. The authors conducted a

cross-sectional study to assess the independent risk factors for predicting left ventricular enlargement (LVE) and hypertrophy (LVH).

Method Echocardiography, pulse wave analysis and assays of biomarkers were performed in a community-based population. LVE was defined by indexing left ventricular internal diameter at end-diastole to height, and LVH was defined in the light of calculation of left ventricular mass index. Multiple correspondence analysis and multiple logistic-regression analysis were applied for the evaluation of independent predictors.

Result Of 1914 participants, 32.3% were male and average age was 59.5 ± 8.9 years; average body mass index (BMI) was 24.2 ± 3.3 kg/m²; 36.7% were hypertensive and 22.5% had dyslipidaemia. Statistical analysis manifested that BMI (OR: 1.255 95% CI 1.191 to 1.322), central blood pressure (CBP, OR: 1.016 95% CI 1.008 to 1.024), radial augmentation index (radial AI, OR: 1.014 95% CI 1.0001 to 1.028) and B-type natriuretic peptide (BNP, OR: 1.001 95% CI 1.0003 to 1.002) was independently related to LVE, while BMI (OR: 1.301 95% CI 1.232 to 1.374), CBP (OR: 1.020 95% CI 1.012 to 1.029) and BNP (OR: 1.002 95% CI 1.001 to 1.003) showed a strong association with LVH. Serum high sensitivity C-reactive protein (hsCRP) and homocysteine (HCY) were not predictive for left ventricular remodelling.

Conclusion In the middle-aged and geriatric population based on the community, radial AI was significantly correlated with LVE rather than LVH, whereas BMI, CBP and BNP was independently robust predictors of left ventricular remodelling (both for LVE and LVH).