中文題目：四肢收縮壓歧異性和周邊動脈疾病和左心室肥厚的關係

英文題目：Association of four limb systolic blood pressure heterogeneity with peripheral artery disease and left ventricular hypertrophy

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Background: A large interarm and interleg systolic blood pressure (SBP) difference and ankle-brachial index < 0.9 have been associated with peripheral artery disease and adverse cardiovascular outcomes. These above 3 values were derived from four limb SBP data. However, there is no study to assess clinical significance of SBP heterogeneity in four limbs. In the present study, we evaluate the relationship between SBP standard deviation among 4 limbs and peripheral vascular and echocardiographic parameters and see whether there is a significant correlation between 4-limb SBP heterogeneity and cardiovascular function.

Methods: A total of 1240 patients were included in the study. The 4 limb blood pressures, brachial-ankle pulse wave velocity (baPWV), and ABI were measured simultaneously by an ABI-form device.

Results: We performed two multivariate analyses for determining the factors associated with increased 4-limb SBP stand deviation [model 1: significant variables in univariable analysis except baPWV, ABI < 0.9, and interarm and interleg SBP difference; model 2: significant variables in univariable analysis except echocardiographic data]. The high left ventricular mass index (LVMI) in model 1 and ABI < 0.9, interarm SBP difference > 10 mmHg, and interleg SBP difference > 15 mmHg in model 2 were independently associated with an increased 4-limb SBP standard deviation.

Conclusion: Our study found that increased LVMI, ABI < 0.9, interarm SBP difference > 10 mmHg, and interleg SBP difference > 15 mmHg were independently associated with an increased 4-limb SBP standard deviation. Assessment of 4-limb SBP heterogeneity may provide a simple method of identifying patients at increased risk of the presence of peripheral artery disease and left ventricular hypertrophy.