

10.1136/heartjnl-2011-300867.568

**Objective** To study the correlation between pulse wave velocity (PWV) with C1, C2, ABI in hypertensive patients.

**Methods** One hundred and forty subjects (38 normotensive subjects (NS group) and 102 essential hypertensive patients (EH group)) were enrolled. Different segments of PWV (baPWV, cfPWV, cbPWV, faPWV) and ABI were measured by BP-203RPE II (VP-1000) device. C1, C2 were measured by CVProfilor DO-2020 device. The correlation between cfPWV and other indexes of arterial elasticity function was analysed.

**Results** (1) Each segment of PWV and ABI were significantly higher in EH group than that in NS group ( $p<0.01$ ). C1, C2 were significantly lower in EH group than that in NS group ( $p<0.05$ ). (2) Other segments of PWV correlated positively with cfPWV ( $p<0.01$ ), while cbPWV and baPWV showed the best correlation with cfPWV ( $r=0.792$  and  $0.703$ ,  $p<0.01$ ). C1, C2 correlated negatively with cfPWV ( $p<0.01$ ). ABI correlated positively with cfPWV ( $p<0.05$ ). (3) Age and blood pressure were the mutual impact factors of arterial elasticity function indexes. With progressing aging (every 10 years), the risks of increasing cfPWV, baPWV, cbPWV and faPWV were raised by 180.3%, 347.4%, 131.3%, 69.0% and the risks of decreasing C1 and C2 were raised by 116.0%, 219.6%. The risks of increasing cfPWV, baPWV and faPWV were raised by 141.3%, 218.8%, 50.9%, and the risks of decreasing C2 and C2 were raised by 169.3%, 67.9% along with every 10 mm Hg SBP elevating. The risks of increasing cbPWV and ABI were raised by 124.6% and 37.8% together with every 5 mm Hg DBP elevating.

**Conclusions** baPWV is a simple and sensitive method of measuring PWV. Age, SBP and DBP are risk factors of the elevated stiffness in both central and peripheral arteries.

[gw22-e0549]

# **CORRELATION BETWEEN PULSE WAVE VELOCITY AND INDICES OF ARTERIAL ELASTICITY FUNCTION ON DIFFERENT SITES OF ARTERIAL SYSTEM IN HYPERTENSIVE PATIENTS**

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