

might be more susceptible to vascular damage associated with hyperuricaemia.

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GENDER-SPECIFIC IMPACT OF SERUM URIC ACID LEVEL ON REGIONAL ARTERIAL STIFFNESS AND WAVE REFLECTION IN GENERAL CHINESE POPULATION

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Objectives Both increased arterial stiffness and hyperuricaemia are associated with elevated cardiovascular risks. Little is known about the relations of serum uric acid (UA) level to regional arterial stiffness and wave reflection. The aim of the study was to investigate the gender-specific association of serum UA and indices of arterial function in a community-based investigation in China.

Methods Cross-sectional data from 2374 adults (mean age 58.24 years) who underwent routine laboratory tests, regional pulse wave velocity (PWV) and pulse wave analysis measurements were analysed in a gender-specific manner. None of the participants had atherosclerotic cardiovascular disease, chronic renal failure, systemic inflammatory disease, gout, or were under treatment which would affect serum UA level.

Results Mean ages were 58.24 ± 12.38 years for all participants (range 35 to 96 years). Mean serum UA was 293.93 ± 75.52 $\mu\text{mol/l}$. Men had higher serum UA level than women (326.76 ± 72.96 $\mu\text{mol/l}$ vs 263.68 ± 64.4 $\mu\text{mol/l}$, $p < 0.001$). Subjects with hyperuricaemia had significantly higher carotid-femoral PWV (PWVc-f) in women (12.8 ± 3.32 m/s vs 10.96 ± 2.75 m/s, $p < 0.001$), significantly higher carotid-ankle PWV in both gender (men: 9.85 ± 3.08 m/s vs 9.29 ± 1.64 m/s, $p = 0.001$; women: 9.62 ± 1.91 m/s vs 9.04 ± 1.7 m/s, $p = 0.003$), while marginally lower augmentation index in men (log AIx-75, $1.24 \pm 0.32\%$ vs $1.3 \pm 0.24\%$, $p = 0.049$). Multiple regression analysis showed that serum UA was an independent determinant only for PWVc-f in women ($\beta = 0.104$, $p = 0.027$), when adjusted for atherogenic confounders. No other independent relationship was found between UA level and other surrogates of arterial stiffness.

Conclusions Serum UA levels are associated with alterations in systemic arterial stiffness that differ in men and women. Women