



Conference Abstract

P.15 Isolated Systolic Hypertension and Central Blood Pressure: Implications from the National Nutrition and Health Survey in Taiwan

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Keywords

ISH
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ABSTRACT

Objectives: We aimed to investigate the association between isolated systolic hypertension (ISH) and central blood pressure (BP) in a nationally representative population.

Methods: A total of 2029 adults without anti-hypertensive medicine, aged ≥ 19 years old participated in the 2013–2016 National Nutrition and Health Survey in Taiwan. Central and brachial BP were simultaneously measured using a cuff-based stand-alone central BP monitor purporting to measure invasive central BP (type II device). Central hypertension [1] was defined by central systolic (SBP)/diastolic BP (DBP) ≥ 130 or 90 mmHg, and ISH was defined by brachial SBP ≥ 140 and DBP < 90 mmHg.

Results: The prevalence of ISH was 6.51% among adults aged ≥ 19 years old (2.15% [$n = 21$] for young adults [aged < 50 years] and 10.54% [$n = 111$] for older adults [aged ≥ 50 years]). ISH subjects had significantly higher central pulse pressure (PP) (62.8 mmHg for the young and 72.4 mmHg for elders) than those subjects with either isolated diastolic hypertension (brachial SBP < 140 and DBP ≥ 90 mmHg, central PP 44.8 mmHg) or systolic diastolic hypertension (brachial SBP ≥ 140 and DBP ≥ 90 mmHg, central PP 60.2 mmHg). There was a U-shaped trend in the association between age and ISH prevalence, and between age and central PP. The ISH prevalence was 2.95%, 1.73% and 10.54%, and the average central PP was 49.5, 47.0, and 54.0 mmHg for subjects aged < 30 , between 30–50, and ≥ 50 years, respectively. Moreover, all ISH adults had central hypertension and a higher prevalence of obesity than the normotensives (body mass index ≥ 27 Kg/m², 71% vs. 17%, for age < 50 years, and 27% vs. 17% for age ≥ 50 years).

Conclusions: All subjects with ISH, young or older, had central hypertension. Central PP was higher in the young and older age groups in comparison to the middle age group. The U-shaped trend corresponded to the association between age and ISH prevalence.

REFERENCE

- [1] Cheng HM, Chuang SY, Sung SH, Yu WC, Pearson A, Lakatta EG, et al. Derivation and validation of diagnostic thresholds for central blood pressure measurements based on long-term cardiovascular risks. *J Am Coll Cardiol* 2013;62:1780–7.

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