The significance of reverse dipper pattern in ambulatory blood pressure monitoring in Korean elderly hypertensive patients

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Background: We investigated the prognostic significance and contributing factors of reverse-dipper (RD) in the elderly hypertensive patients.

Methods and Results: 544-patient database was obtained retrospectively; 268 elderly hypertensive patients were included. In 4 categories of ambulatory blood pressure monitoring (ABPM), RD was significantly increased in the patients older than 70 (p=0.039), and predicted chronic renal failure (OR; 2.789, p=0.034). In RD, Day-time systolic and diastolic BP were significantly lower levels and within normal range regardless of antihypertensive medication. Conclusion: This study suggests that RD is a more prevalent and important factor to predict target organ damage in the oldest patients over 70 years old. Wider examination and evaluation of 4 categories of ABPM should be considered not to miss the optimal management of hypertension.

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Relationship between coronary artery plaque composition and brachial-ankle pulse wave velocity in patients with coronary artery disease

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Background: Brachial-ankle pulse wave velocity (baPWV) is an indicator of atherosclerotic cardiovascular risk and/or vascular damage.

Methods: We measured ankle-brachial index (ABI) and baPWV (Colin Co) in 190 pts with coronary artery disease (CAD). Virtual Histology intravascular ultrasound (VH-IVUS) imaging was available in target lesions of 52 pts with symptomatic CAD who were divided into two groups: baPWV >1600cm/sec (28 pts) and baPWV <1600cm/sec (24 pts). Results: Pt age was 66±7.68 yrs in baPWV >1600 group vs 55±12.14 yrs in baPWV <1600 group (p=0.00029). While vessel size, lesion length, plaque burden, and remodeling index were similar, minimal lumen area (MLA) was smaller in baPWV >1600 (p=0.038, Table). VH-IVUS analysis of coronary artery plaque composition showed %max NC was similar (p=0.545), but %max calcium was higher in the baPWV >1600 group (p=0.041), and %maximal calcium correlated with baPWV (r=0.354, p=0.011). Conclusion: High baPWV indicated more severe CAD (smaller MLA) and greater atherosclerosis disease complexity (more calcified coronary plaque).