**NON-DIPPING VERSUS NOCTURNAL HYPERTENSION: IMPROVING DETECTION OF PRECLINICAL ORGAN DAMAGE IN HYPERTENSION**

**Poster Contributions**  
**Poster Hall B1**  
**Sunday, March 15, 2015, 9:45 a.m.-10:30 a.m.**

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**Session Title:** Prognosis in Hypertension  
**Abstract Category:** 22. Prevention: Hypertension  
**Presentation Number:** 1179-125

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**Background:** The clinical relevance of nocturnal hypertension (NH) in comparison with non-dipping status has not been clarified yet regarding subclinical target organ damage. Therefore, in the present study we aimed to elucidate whether nocturnal hypertension or dipping status reflects better organ damage and to explore potential underlying mechanisms.

**Methods:** The study population consisted of 319 newly diagnosed hypertensive patients. In all participants, several indices of preclinical organ damage were evaluated. Based on the nocturnal BP levels (systolic BP >120 mmHg and/or diastolic BP >70 mmHg) the study population was divided into two groups: nocturnal hypertensives (NH, n=161) and nocturnal normotensives (NN, n=158). Also, individuals with ≥10% difference in nocturnal systolic blood pressure (SBP) relative to daytime values were defined as dippers, while non-dippers were defined as <10% nocturnal decrease in SBP.

**Results:** Patients with NH were characterised by increased arterial pulse wave velocity (PWV) (9.1±1.7 vs 8.4±1.5 m/sec, p=0.0001) and marginally decreased flow mediated dilation values (5.1±3.4 vs 4.1±2.6, p=0.066). In addition, this group showed increased carotid intima-media thickness (0.77±0.18 vs 0.69±0.15 mm, p=0.016) compared to normotensive subjects, whereas no other significant differences were observed, regarding other vascular indices. Notably, they also exhibited higher values of LVMI (88.1±22.9 vs 82.8±16.6 gr/m2, p=0.043) and E/A (0.90±0.26 vs 0.88±0.43, p=0.030), respectively. On the contrary, non-dipping status was associated only with differences in PWV (9.26±0.2 vs 8.64±0.2 m/s, p=0.031,) and also in creatinine clearance values in the group of NH (95±3 vs 106±4, p=0.025).

**Conclusion:** The presence of NH is accompanied by subclinical atherosclerosis, as well as structural and functional abnormalities of the left ventricle, however without significant impairment of renal function. Therefore, NH could be preferably integrated with the risk of target organ damage rather than non-dipping status.