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### **Nocturnal Dipping in Prehypertensive Patients**

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**Introduction:** The nocturnal dipping pattern in prehypertensive children and adolescents has not been studied well. Decreased dipping in nocturnal blood pressure in children and adolescents is related to secondary hypertension, obesity, obstructive sleep apnea, low birth weight, diabetes mellitus type 1 and type 2. Obesity is often associated with primary arterial hypertension and prehypertension in children and adolescents and affects not only average 24-hour BP values, but also decreases drop in nocturnal BP. Prehypertension is defined as blood pressure (BP)  $\geq 90$  th percentile, or  $\geq 120/80$  mmHg, but  $< 95$ th percentile for age, sex and height.

**The aim:** of our study was to investigate the nocturnal drop in blood pressure in patients with prehypertension.

**Patients and methods:** We studied 24-hour blood pressure monitoring results in a group of 206 patients (109 males) aged 6-20 years, mean age  $14.62 \pm 2.73$  years referred to our cardiology and nephrology clinic as hypertension.

**Results:** Normal findings had 58 (28%), prehypertension was present in 89 (43%) and confirmed arterial hypertension (primary and secondary) in 59 (29%) of patients. In the group of prehypertensive patients 53 (60 %) of them were non-dippers. Obesity played important role in prehypertensive blood pressure changes – among non-dipping patients almost one half were obese (47%), in comparison with dippers with the significantly lower prevalence of obesity (39%) ( $p < 0.01$ ).

**Conclusion:** The absence of nocturnal drop in blood pressure is a common finding in prehypertensive patients and is significantly associated with the increased body mass index.