DOI: 10.5152/TurkThoracJ.2019.182

[Abstract:0062] OP-037 [Accepted: Oral Presentation] [Sleeping Disorders]

The Prevalence of Obstructive Sleep Apnea Syndrome in Non-Dipper Hypertension Patients

Fulya Omak Kaya[1], Serap Argun Barış[1], İlknur Başyiğit[1], Göksel Kahraman[2], Haşim Boyacı[1]

[1]Department of Pulmonary Diseases, Kocaeli University School of Medicine, Kocaeli, Turkey
[2]Department of Cardiology, Kocaeli University School of Medicine, Kocaeli, Turkey

Objectives: The blood pressure (BP) has circadian rhythm and fluctuates over a 24-hour period. A ≥10% decrease in average blood pressure at night according to daytime BP was defined as dipper hypertension (DHT), and decrease less than 10% was defined as non-dipper hypertension (NDHT). The aim of our study was to investigate the prevalence of obstructive sleep apnea syndrome (OSAS) in NDHT patients.

Methods: Twenty-three patients with NDHT and 12 patients with DHT according to ambulatory blood pressure monitoring were included in the study between October 2017 and October 2018. Demographic characteristics, Epworth Sleepiness Scale (ESS), Pittsburgh Sleep Quality Index (PSQI) and polysomnography scores were recorded.

Results: Fifteen of the participants were female (42,9%) and 20 (57,1%) were male. The mean age was 56,1±12,03 years. Age, gender, demographic characteristics, smoking history and ESS scores were similar between NDHT and DHT groups. The presence of HT in the family, the use of general preventive strategies and the therapeutic options in the management of hypertension were similar. While there was no difference between the groups in terms of other comorbidities, cardiovascular comorbidities were significantly higher in the NDHT group (p=0.04). As expected in the NDHT, the mean night systolic blood pressure was high. Furthermore, the mean diastolic blood pressure at night was also higher in NDHT group than DHT group (p=0,004). According to PSQI score, 54,3% of the patients had poor sleep quality. Twelve (63,2%) of the patients with poor sleep quality were in the NDHT group and 7 (38,8%) were in the DHT group, but the difference was not significant. In addition, subjective sleep quality was found to be worse in NDHT group (p=0,013). OSAS was detected in 32 (91,4%) of the study population. The prevalence of OSAS was higher in NDHT patients than in DHT group, but the difference was not significant (95,7% vs 83,3%, p=0,2). The median apnea-hypopnea index (AHI), the mean oxygen desaturation index and desaturation time were similar between the groups.

Conclusion: Overall OSA prevalence was found to be over 90% in our study population, and OSAS prevalence was higher in NDHT patients than in DHT group, but the difference was not statistically significant. Moreover, the rate of poor sleep quality was higher and subjective sleep quality was significantly lower in NDHT patients. A large number of multicenter prospective studies are needed to assess OSAS prevalence and sleep quality in NDHT patients.

Keywords: Circadian rhythm, hypertension, non-dipping, obstructive sleep apnea syndrome