

DOI: 10.5152/TurkThoracJ.2019.183

[Abstract:0271] OP-038 [Accepted: Oral Presentation] [Sleeping Disorders]

Body Surface Area in Patients with Obstructive Sleep Apnea

Seda Beyhan Sağmen, Nesrin Kiral

Training of Pulmonary Medicine, Health Science University Kartal Dr. Lütfi Kırdar Training and Research Hospital, İstanbul, Turkey

Objectives: Body surface area is used as an anthropometric measurement in various medical fields such as oncology. The aim of this study was to investigate the relationship between body surface area (BSA) and polysomnographic parameters in patients with obstructive sleep apnea (OSA).

Methods: The files of patients who were diagnosed with OSA in our hospital's sleep clinic between 2014-2017 were retrospectively reviewed. Patients' age, gender, weight, height, body mass index (BMI), sleep duration, sleep efficiency, sleep stages, apnea-hypopnea index (AHI), apnea index (AI), minimum oxygen saturation, mean oxygen saturation, oxygen desaturation index (ODI), time spent below 90% oxygen saturation (TS90%) were recorded. Body surface area (BSA) was calculated by Boyd and Mosteller method. Data were analyzed with SPSS 17.0.

Results: A total of 677 patients were included in the study, 432 (63.81%) of which were male and 245 (36.19) were female. The mean age of the patients was 49.57 ± 11.57 years. The average BMI value was 31.83 ± 5.8 kg/m². The BSA values were, 2.05 ± 0.22 m² when calculated by the Mosteller method and 2.09 ± 0.23 m² when calculated by the Boyler method. The values of BMI, BSA Mosteller and Boyd were found to be higher in the severe OSA group than in the mild and moderate group. A positive correlation was found between BMI with AHI, TS90 and ODI and a negative correlation between BMI with the minimum oxygen saturation values. A positive correlation was found between BSA Mosteller and Boyd with AHI, AI, TS90, and ODI values and a negative correlation between BSA Mosteller and Boyd with minimum oxygen saturation values. When the relationship between BMI, BSA, and sex was examined according to the OSA severity, the average BMI of women in mild, moderate and severe OSA groups was higher than that of males. The mean BSA measured by Mosteller and Boyd method was higher in males than in females in mild, moderate and severe OSA groups.

Conclusion: In obstructive sleep apnea patients BSA, just like BMI, was found to be correlated with polysomnographic parameters. Considering the correlation of the body surface area with polysomnographic parameters, it is suggested that BSA can be used just like BMA in patients with suspected OSA in clinical practice.

Keywords: Body surface area, obstructive sleep apnea severity, body mass index