Summary

This study aimed to evaluate the impact of CPAP, as a line for management of OSAS, on estimated serum levels of certain inflammatory markers.

The study included 45 patients; 15 hypertensive patients, 15 cardiac patients and 15 OSAS patients, and 15 volunteers. All patients underwent determination of demographic and anthropometric measures. Daytime sleepiness was evaluated using the Epworth Sleepiness Scale (ESS) and an ESS Score >10 was used to confirm the presence of excessive daytime sleepiness and the higher the score, the greater the severity of OSA. Peripheral blood oxygenation was evaluated as the number of drops of SaO_2 to <90%, <85% and <80% throughout sleep period and the lowest SaO_2 was determined. Blood samples were obtained for estimation of serum high-sensitivity CRP, IL-6 and TNF-α. Then, all OSAS patients received continuous airway positive pressure for ≥4 hours/night for 3 months and all measures were repeated.

Mean ESS score of OSAS patients was significantly higher and mean lowest SaO_2% was significantly lower compared to negative control group and other patients' groups. Mean serum levels of hs-CRP, IL-6 and TNF-α estimated prior to CPAP treatment of OSAS patients were significantly higher compared to negative control group and other patients' groups.

CPAP treatment significantly reduced ESS and resulted in significant elevation of lowest SaO_2%. Concomitantly, CPAP treatment significantly reduced serum levels of hs-CRP, IL-6 and TNF-α compared to pre-treatment levels.

Good CPAP compliance was recorded by 11 patients (73.3%), while the other 4 patients (26.7%) showed poor CPAP compliance .