Purpose

The association of obstructive sleep apnea syndrome (OSAS) and metabolic syndrome (MS) has been demonstrated in studies and in recent years; the effect of OSAS on insulin resistance independent of the level of obesity is being investigated. Nesfatin-1 is a newly defined 82 amino acid protein with a precursor molecule of NUCB2 (nucleobindin 2). Nesfatin-1 is not only essential in regulation of food ingestion but also important in regulation of some brain functions, autonomic regulation, stress, mental state, and paradoxical sleep. We aimed to evaluate the relationship between OSAS and MS and the MS dependent or independent effect of Nesfatin-1 on this relationship.

Methods

Patients admitted with clinical signs of OSAS are included. Patients are divided into three groups based on Apnea-Hypopnea Index (AHI) on Polysomnography (PSG) as mild, moderate, and severe OSAS. A total of 59 patients were included the control patients. Several OSAS parameters and laboratory findings which are and are not MS dependent are compared. Nesfatin-1 levels are evaluated in all OSAS patients with and without MS.

Results

There were significantly more males in all groups (p = 0.007). There was no significant difference between groups in terms of Nesfatin-1 levels. Nesfatin-1 levels were significantly lower in MS group compared to non-MS group (p = 0.021).

Conclusion

Nesfatin-1 which is known to play a role in the pathophysiology of insulin resistance can be a beneficial target in developing new therapeutic targets for treatment of patients with obesity without any toxic effects in the future.