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**Title:** Serum omentin levels in patients with obstructive sleep apnea syndrome

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**Body:** Background: Obstructive sleep apnea syndrome (OSAS) is associated with increased rates of cardiovascular diseases (CVD). The basic mechanisms involved in the increased cardiovascular risk of OSAS remain unclear. Recent discoveries of fat-secreted substances which serve endocrine roles, improve our understanding of the relationship between OSAS, CVD, and the metabolic syndrome. In this study, we aimed to examine associations between omentin levels and OSAS. Methods: 46 newly diagnosed OSAS patients and 35 age-matched nonapneic controls were enrolled in this study. Polysomnography (PSG) was performed in all patients. Results: The mean age was 48.1±12.5 (24-74) years in OSAS group and 42.8±14.1 (21-69) in control group. 46 (34 males and 12 females) of the 81 patients were classified as having OSAS, and 35 patients (20 males and 15 females) as control. Plasma levels of omentin were found to be markedly higher in OSAS patients (570.8 ng/ml) than in the control group (432.0 ng/ml; p<0.001). In addition, plasma levels of omentin were found to be high in all OSAS subgroups than in controls. The plasma omentin levels were negatively correlated with sex, smoking and positively correlated with age, BMI, AHI, Epworth sleepiness scale.

Spearman correlation coefficients between age, sex, BMI, smoking, Epworth sleepiness scale, AHI, minimum SpO2 and Omentin levels in OSAS groups.

	r	p
Age	0.45	0.002
Sex (F:1, M:2)	-0.21	0.17
Smoking	-0.19	0.22
BMI	0.19	0.21
AHI	0.12	0.42

Epworth sleepiness scale	0.02	0.90
Minimum SpO2	-0.10	0.53

Conclusions: We conclude that circulating omentin levels are elevated in OSAS patients. To the best of our knowledge, this is the first clinical study that demonstrated the association between omentin and OSAS.