

## Resistin and Cardiac Remodeling in Patients with Obstructive Sleep Apnea

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### Background:

Resistin is an adipocytokine, associated with obesity and inflammation. Its exact role in insulin resistance and diabetes is still controversial, but there is now enough data, concerning its direct effects on myocardial cells. The relation between resistin plasma levels with risk of new onset heart failure in humans has been confirmed in several large studies.

### Materials and methods:

Resistin plasma levels were measured in 30 patients with obstructive sleep apnea and mild systolic dysfunction (ejection fraction 45,  $7\% \pm 6$ , 17%), and compared to fifteen patients with obstructive sleep apnea and normal ejection fraction (ejection fraction 60,  $3 \pm 6$ , 3%). The effect of bilevel positive airway pressure therapy was evaluated during a three month follow-up in 19 patients. The dynamics of markers of haemodynamic stress – NT-pro-BNP was determined in addition. The association between resistin, obesity, insulin resistance and severity of obstructive sleep apnea was analysed. Results: Resistin plasma levels were significantly higher in the group with mild systolic dysfunction in comparison to those with preserved ejection fraction (6, 92 ng/ml vs 2, 78 ng/ml). This difference lost significance after adjustment for confounders. In a linear regression analysis resistin levels were not associated with body mass index, obesity, homeostasis model assessment- index, systolic and diastolic blood pressure, or obstructive sleep apnea severity.

Though not of statistical significance its plasma levels, decreased (8, 53 vs. 4, 16 ng/ml; p=0, 12) as a result of a three-month bilevel positive airway pressure therapy.

### Conclusions:

According to our data it is elusive to determine whether resistin plasma levels are associated with early myocardial damage. Its application for the monitoring of the effect of bilevel positive airway pressure therapy is tentative.