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Obesity, and not obstructive sleep apnea, is responsible for metabolic abnormalities in a cohort with sleep-disordered breathing.

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OBJECTIVE: To assess the profile of metabolic abnormalities in subjects with obstructive sleep apnea (OSA). **PATIENTS AND METHODS:** In a case-control study conducted in two years, from April 2003 to March 2005, data obtained from polysomnography study, lipid profile, fasting blood sugar, serum insulin, insulin resistance, leptin and adiponectin levels, were compared between the various groups. Included in the study were OSA subjects from a sleep laboratory and matched controls from the community. Those with recent myocardial infarction, upper airway surgery, class III/IV heart failure, pregnancy, acromegaly, chronic renal failure, or who were on treatment for hyperthyroidism, on systemic steroid treatment, or on hormonal replacement therapy, were excluded from the study. **RESULTS:** Forty apneic obese subjects (AHI=32.19, range 13-52.75) were compared with 40 non-apneic obese controls (AHI=1.3, range 0-2.45) and 40 normal weight control subjects (AHI=0.7, range 0-1). No significant difference was noted in levels of fasting blood sugar, insulin resistance (obese apneics 61.9, obese controls 47.8, non-obese controls 19.1), leptin (obese apneics 10.65 microg/L, obese controls 8.52 microg/L, non-obese controls 2.83 microg/L) or adiponectin (obese apneics 4959.3 ng/ml, obese controls 5706 ng/ml, non-obese controls 7412 ng/ml) in the OSA group compared to obese controls. **CONCLUSIONS:** OSA has no independent association with lipid abnormalities, insulin resistance, serum leptin and adiponectin levels. In multivariate analysis, obesity was the major determinant of metabolic abnormalities in this cohort.

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