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[Relationship between obstructive sleep apnea/hypopnea syndrome and insulin resistance]

[Article in Chinese]

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OBJECTIVE: To investigate whether obstructive sleep apnea/hypopnea syndrome (OSAHS) is independently associated with insulin resistance (IR). **METHODS:** We recruited 60 male obese patients with OSAHS [OSAHS group, age (42.3 +/- 2.6) years, body mass index (BMI) (28.3 +/- 2.1) kg/m², waist/hip ratio (WHR) 0.95 +/- 0.05], 60 male weight-matched obese patients without OSAHS [OB group, age (41.5 +/- 3.1) years, BMI (27.7 +/- 1.5) kg/m², WHR 0.94 +/- 0.04] and 60 male normal weight subjects [NW group, age (41.8 +/- 2.4) years, BMI (22.6 +/- 1.9) kg/m², WHR 0.86 +/- 0.05]. The subjects underwent polysomnography and OSAHS was defined as an apnea-hypopnea index (AHI) > or = 5. The systolic blood pressure and diastolic blood pressure were measured. IR was evaluated by fasting serum true insulin (TI) level and IR index based on the homeostasis model assessment method (HOMA-IR). In the OSAHS group, multiple linear regression was used with either TI or HOMA-IR as the dependent variable, and the corresponding set of independent variables included age, BMI, WHR, AHI and minimum oxygen saturation (MSpO₂). **RESULTS:** After adjustment for age, BMI, and WHR, the OSAHS group was more insulin resistant, as indicated by the higher levels of TI and HOMA-IR. Multiple linear regression showed that the central obesity parameter (WHR) was the major determinant of IR of the OSAHS group, while sleep-disordered breathing parameters (AHI and MSpO₂) were also independent determinants of IR of the group (TI: AHI P = 0.017, TI: MSpO₂ P = 0.005; HOMA-IR: AHI P = 0.008, HOMA-IR: MSpO₂ P = 0.003). **CONCLUSION:** OSAHS may be independently associated with IR.

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