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LETTER TO THE EDITOR

Severity of obstructive sleep apnea and metabolic variables: complex relationship needs comprehensive consideration

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Dear Editor:

We recently read the article named "Correlation between the severity of apnea and hypopnea sleep, hypertension and serum lipid and glycemic: a case control study" conducted by de Sousa Rodrigues and Lira [1] with great interest. In this well-presented study, the authors explored the correlation between the severity of obstructive sleep apnea (OSA) and the levels of blood pressure (BP), lipids and glucose; however, no correlations between the severity of OSA and metabolic variables were found.

First of all, we congratulate the authors for carrying out such an important study of the severity of OSA and hypertension, dyslipidemia and hyperglycemia. However, the conclusion of this study differs from previous studies focused on increased BP, lipid profile, insulin resistance and respiratory disturbance index [2–4]. This inconsistence may partly be explained by the small sample size in this study, which should be estimated through power calculations (a two-sided confidence level of 99.9% and power of 80%). 6–11 subjects per group may not be sufficient to draw a conclusion.

Besides, some additional considerations should be mentioned. First, physical activity and dietary habits may be associated with metabolic disorders in OSA patients [5], thus these factors should be considered. In addition, confounding effects of gender difference and medications may also have influence in metabolic variables, and these factors should also be taken into account. Finally, inflammatory cytokines (i.e., interleukins, tumor necrosis factor-α, and C-reactive protein) and adipokines (i.e., leptin, adiponectin, visfatin and resistin) are related to obesity, hypertension and apnea [6]. These biomarkers altered in metabolic conditions with OSA.

The results might be more convincible if the authors enroll more participants and give information about the above-mentioned factors. We believe that these findings will provide valuable information to clarify the comprehensive relationship between metabolic variables and the severity of OSA.

Conflict of interest The authors have reported that no potential conflicts of interest exist with any companies/organizations whose products or services may be discussed in this article.

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