Leptin, Hypoxia and Metabolic Syndrome in Patients with Obstructive Sleep Apnea

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The Authors Reply

We thank Macrea and colleagues for their interest and valuable comments on our manuscript (1). Obstructive sleep apnea syndrome is a common disorder in patients with metabolic syndrome and it is independently associated with an increase in cardiovascular risk factors (2). As mentioned by Macrea et al, it has been demonstrated that patients with obstructive sleep apnea have an increased circulating levels of leptin (3). However, the etiology of the high leptin levels in obstructive sleep apnea is still unclear. Not only hypoxia but also body mass index has been found to be correlated with hyperleptinemia in obstructive sleep apnea patients (3).

In our trial, we measured leptin mRNA expression levels in epicardial, paracardial and subcutaneous adipose tissue but not in plasma. Clinical trials have shown that serum leptin levels have diurnal variation in obstructive sleep apnea patients and the secretion of leptin might be suppressed in the morning hours (4). Therefore, these may help explain the different results of the study of Macrea et al and our study. In addition, we did not assess the presence of obstructive sleep apnea and hypoxia in our study group. This means that we do not know whether hypoxia is the reason for the higher leptin levels measured in our metabolic syndrome group. Also as stated by Macrea et al they had a small sample size and it was thus not possible to reach an accurate result. In conclusion, we need future studies with a larger sample size to clarify this issue.

The authors state that they have no Conflict of Interest (COI).

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References