Severe Obstructive Sleep Apnea is a Strong Predictor for Systemic Arterial Hypertension

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Introduction:

Obstructive sleep apnea (OSA) is an important risk factor for systemic arterial hypertension (SH).

Aim:

Identify the strongest predictors for SH in patients with OSA syndrome.

Material and Results:

978 consecutive patients (pts) with clinically suspected OSA were included prospectively and followed-up for 7 years, with sleep questionnaires, anthropometric measurements, polisomnography for apnea-hypopnea index (AHI) (normal 0–4, mild 5–14, moderate 15–29, severe 30), history of ST. We evaluated the Odds Ratio (OR) with 95% confidence interval (CI) in a univariate analysis and the independent variables in order to identify the most important predictors for ST. 692 males (71%) 286 females (29%), age 50 ± 12 years (18–84 years). Body Mass Index (BMI): 34 ± 6 kg/m2 (17–56 kg/m2), AHI 36 ± 28/h. SH was found in 59, 7% of patients. The mean time from the diagnostic of SH was 7 ± 5years. The structure of the population regarding SH was classified following the European Society of Hypertension 2007 Guidelines as follows: if the 59% of pts with SH 11% with high normal values, 15% stage I, 29 % stage II, 8% stage III. AHI in all 3 levels (mild, moderate and severe), with reference normal, is extremely significant (p 0.001) in HT patients. Still, only severe OSA is the strongest predictor for SH, OR 3, 2 (p 0.001, CI 1, 67–5, 59). Mild and moderate OSA did not significantly influence the appearance of SH (p 0, 14, OR 0,58, CI 0,29 − 1,20, p 0,24, OR 1,52, CI 0,76 − 2,86). SH is a weak predictor for OSA in univariate analysis, p = 0,045, OR 1, 76, CI 1, 01−3, 08.

Conclusion:

Patients with OSA are exposed to a higher risk of developing SH. A strong predictor for SH is only severe OSA.