

Study of Differences in Heart Rate in Patients with Apnea and Insomnia Syndromes

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A high percentage of patients with obstructive sleep apnea-hypopnea syndrome (OSAHS) also have chronic insomnia, particularly elderly people. Additionally, these patients usually show high levels of depression, stress and other sleep disorders. In order to quantify the potential negative impact that insomnia produces in patients with OSAHS, some studies have analyzed the usual parameters in the polysomnographic reports, although the results are inconclusive.

The aim of this paper is to study the possible effect that the combination of these pathologies might produce in heart rate (HR). We analyzed 85 polysomnograms (PSG) from two groups of patients with OSAHS, for cases without insomnia (G1, N=55, 53.4 +- 13.1 years) and with insomnia (G2, N=30, 49.1 +- 10.0 years). For each sleep stage (aWake, 1, 2, 3, REM), epochs were grouped with the presence of obstructive apnea/hypopnea (G#A) or without apneic events (G#). The obtained values (mean +- standard deviation; beats per minute) are:

- W: (G1: 71.7 +- 11.9 bpm; G2: 69.4 +- 9.9 bpm).

- 1: (G1: 70.2 +- 13.0 bpm; G2: 67.8 +- 10.0 bpm), (G1A: 70.6 +- 3.0 bpm; G2A: 70.6 +- 18.5 bpm).

- 2: (G1: 67.2 +- 12.0 bpm; G2: 64.7 +- 11.0 bpm), (G1A: 69.2 +- 12.1 bpm; G2A: 66.7 +- 17.5 bpm).

- 3: (G1: 67.1 +- 12.4 bpm; G2: 64.9+- 10.8 bpm), (G1A: 70.9 +- 8.4 bpm; G2A: 67.5 +- 19.8 bpm).

- REM: (G1: 67.0 +- 11.2 bpm; G2: 65.9+- 10.9 bpm), (G1A: 67.1 +- 9.7 bpm; G2A: 68.4 +- 17.2 bpm).

Although not statistically significant, the results show that the HR in the studied PSG show higher values for G1 in all sleep stages for periods without apnea. In case of apnea, HR is also greater for G1 except for REM sleep stage.