

Common problems during automatic continuous positive airway pressure titration in the patients with obstructive sleep apnea.

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Abstract

Background: Automatic continuous positive airway pressure (auto-CPAP) titration become an alternative treatments of obstructive sleep apnea (OSA) because they adjust the delivered pressure and may be more suitable for patients. However, some annoying problems exists and could be resolved if we face them.

Objectives: To disclose the comfort level and common annoying problems with sleep quality on the OSA patients during auto-CPAP. Fifty OSA patients experienced auto-CPAP titration in the lab and filled out the questionnaire after the intervention. Thirty OSA patients experienced sham CPAP (pressure = 4cmH₂O) for 2 hours then auto-CPAP titration. The algorithm of auto-CPAP titration was adjusted based on the polysomnography (PSG) in the lab. The other twenty OSA patients experienced adjusted auto-CPAP titration directly. There were two parts of the questionnaire, including comfort level and sleep problems. We calculated and analyzed the scores of the comfort level and the answers of the sleep quality problems.

Results: Comparing the comfort level between the thirty OSA patients (split night CPAP) and the other twenty OSA patients (CPAP titration), the poorer sleep quality comparing as previous experience improved (33% to 25%). Although the improving the unsuitable pressure level from the machine (40% to 10%, $p=0.0264$), it still exists some problems, such as annoying sound (30% V.S 30%) and unsuitable mask (20% V.S. 20%). It was surprising that both high incidence of the awaken event during the split night CPAP and auto-CPAP titration (90% V.S. 85%).

Conclusions : We should think it again about the comfort level and sleep quality level under auto-CPAP titration. Although the auto-CPAP titration may improve the delivered pressure level, the annoying sounds, the unsuitable mask, and other personality issue also influence the sleep quality.