

A. Title

Effect of therapy in patients on opioid medications with central sleep apnea.

B. Authors and Institutions

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Introduction

The purpose of this study was to determine the effect of supplemental oxygen and bilevel positive airway pressure (BPAP) therapy in patients on around the clock opioids who had central sleep apnea (CSA) defined at a central apnea index (CAI) ≥ 5 events/hr.

Methods

We studied 37 consecutive patients on opioids between March 2005 and May 2006 who underwent therapeutic sleep study in whom a baseline period was obtained before a trial of therapy was initiated with oxygen and/or BPAP was tried for central sleep apnea, with or without concomitant obstructive sleep apnea. Adequate therapy was defined for sleep apnea as an overall apnea-hypopnea index (AHI) <5 events/hr, and for central sleep apnea as a CAI <5 events/hr on therapy for at least a period of 20 min.

Results

Eight patients with CSA from a diagnostic study had a CAI <5 events/hr during the therapeutic study before therapy was initiated. Four patients without demonstrable CSA in a diagnostic study had a CAI ≥ 5 events/hr during the baseline period of the therapeutic study. Therefore, there was significant night to night variation in the demonstration of CSA in 32% (95%CI: 18-50%). Supplemental oxygen was effective in treating CSA in 53% (95%CI: 28-77%). BPAP treated CSA effectively all 20 patients in whom it was tested: 100% (95%CI: 83-100%) but the overall AHI was controlled adequately only in 10 patients: 50% (95%CI: 27-73%). Therefore, further titration studies were required in 27% (95%CI: 14-44%) of the patients.

Conclusion

We conclude that patients on opioid medications with CSA: (1) there is marked night to night variation of their condition, (2) supplemental oxygen controls adequately central apneas about half of the time, (3) central apneas can be BPAP can eliminated central apneas and (4) additional titration studies often needed to optimize therapy.

Support (optional)

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