Is Prediction of CPAP Adherence in Obstructive Sleep Apnea in the Perioperative Setting Feasible?

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There is growing interest in the of continuous positive airway pressure (CPAP) in the perioperative setting with untreated obstructive sleep apnea (OSA).¹

Guralnick et al. describe CPAP adherence in patients with newly diagnosed OSA prior to elective surgery.² The major findings were that African American race, male gender and depressive symptoms were associated with reduced CPAP adherence. However, we consider that some aspects of this study need clarification in order to extrapolate the findings into clinical practice.

First, we believe that the overall results could be separated according to the OSA severity categories of moderate or severe. This separation into two different groups could clarify the overall message of the study, since the literature suggests that more severe OSA is associated with greater CPAP adherence compared to milder severities.³ Moreover, previous studies have shown that a higher baseline apnea-hypopnea index (AHI) was the only significant independent predictor of better CPAP compliance.⁴

Secondly, the finding of male gender being a risk factor for poor CPAP adherence warrants further consideration.² We suggest that male gender may be a surrogate for risk factors or comorbidities such as smoking, obesity, or anthropometric parameters such as neck circumference.

Thirdly, depressive symptomatology has been reported to be an independent predictor of reduced CPAP adherence.⁵ This aspect may have a dual interpretation in the population tested in this study and is not clearly in the same direction of previous studies.

Fourth, there is lack information about some relevant practical aspects that was not examined: (a) type of surgery and extent of postoperative pain; (b) the auto-set CPAP settings were atypical, with a pressure range of only 5 around the optimal pressure derived from polysomnography (PSG); (c) they do not report on the efficacy of CPAP from the machine download; (d) 50% of patient who scored highly on the ques-

tionnaire refused PSG—were their postoperative outcomes different to those who were treated with CPAP?

We propose to include a more accurate assessment of possible psychological disorders that may interfere with patient adherence to CPAP and hospital education program before surgery.

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DISCLOSURE STATEMENT

The authors have indicated no financial conflicts of interest.