

The relationship between the STOP-BANG questionnaire and the continuous positive airway pressure in patients with obstructive sleep apnea/hypopnea syndrome.

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Objective: Patients with higher score on the Stop-Bang questionnaire (SBQ) has a high probability of more severe OSA, but no paper mentioned about the level of continuous positive airway pressure (CPAP). Our study is to identify the relationship between SBQ and the level of CPAP in adult patients with obstructive sleep apnea/hypopnea syndrome (OSAHS).

Methods: We retrospectively reviewed the records of 25 male subjects with obstructive sleep apnea who had undergone successful CPAP titration in our new sleep center from March 2017 to December 2017. All OSAHS patients underwent successful full-night manual titration to determine the optimal CPAP pressure level for OSAHS treatment. The polysomnography (PSG) parameters and completed physical examination, including body mass index (BMI), neck circumference, waist circumference, Epworth Sleepiness Scale (ESS), Stop-Bang questionnaire (SBQ, BMI $\geq 30\text{kg/m}^2$) were collected and analyzed. We used correlation analysis to evaluate the CPAP pressure between the PSG parameters, ESS, SBQ, and apnea/hypopnea index (AHI).

Results: When the physical examination variables (BMI, Waist and neck circumference) were correlated with the optimal CPAP pressure, we found that SBQ was reliable predictors of CPAP pressures ($P < 0.001$, Pearson correlation) but not the ESS and AHI ($P = 0.56$, $P = 1.95$). We used CPAP pressure $\geq 7\text{mmH}_2\text{O}$ ($n = 10$) as the cut-off level because the higher CPAP pressure may cause the discomfort of mask wearing. The SBQ and BMI were associated to the higher CPAP group ($P < 0.001$, $P < 0.001$, Mann-Whitney U test). In the ROC curve, SBQ had the best area under the curve ($\text{AUC} = 0.973$) and AUC of BMI was 0.897. The sensitivity and specificity of SBQ (cut-point ≥ 6) and BMI (cut-point ≥ 30.1) were (80%, 100% ; 90%, 80%).

Conclusion: This study distinguished the correlation between SBQ and BMI with the optimal CPAP pressure. The higher level of SBQ (≥ 6) and BMI (≥ 30.1) may predict the high effective level of CPAP pressure ($\geq 7\text{mmH}_2\text{O}$). The results derived from the present small sample of male patients with OSAHS, should be validated on a larger sample size.

中文題目：探討 STOP-BANG 問卷與阻塞性睡眠呼吸中止症病患使用正壓呼吸器治療壓力間的關聯性

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