

STOP-Bang questionnaire

For screening see: <http://www.stopbang.ca/patient/screening.php>

Obstructive sleep apnea (OSA) is known to be associated with negative outcomes and is underdiagnosed. The STOP-Bang questionnaire is a screening tool for OSA that has been validated in both medical and surgical populations. Given that readmission, after surgical intervention is an undesirable event, Caplan et al. sought to investigate, among patients not previously diagnosed with OSA, the capacity of the STOP-Bang questionnaire to predict 30-day readmissions following craniotomy for a supratentorial tumor.

For patients undergoing craniotomy for treatment of a supratentorial neoplasm within a multiple-hospital academic medical center, data were captured in a prospective manner via the Neurosurgery Quality Improvement Initiative (NQII) EpiLog tool. Data were collected over a 1-year period for all supratentorial craniotomy cases. An additional criterion for study inclusion was that the patient was alive at 30 postoperative days. Statistical analysis consisted of simple logistic regression, which assessed the ability of the STOP-Bang questionnaire and additional variables to effectively predict outcomes such as 30-day readmission, 30-day emergency department (ED) visit, and 30-day reoperation. The C-statistic was used to represent the receiver operating characteristic (ROC) curve, which analyzes the discrimination of a variable or model.

Included in the sample were all admissions for supratentorial neoplasms treated with craniotomy (352 patients), 49.72% (n = 175) of which were female. The average STOP-Bang score was 1.91 ± 1.22 (range 0-7). A 1-unit higher STOP-Bang score accurately predicted 30-day readmissions (OR 1.31, p = 0.017) and 30-day ED visits (OR 1.36, p = 0.016) with fair accuracy as confirmed by the ROC curve (C-statistic 0.60-0.61). The STOP-Bang questionnaire did not correlate with 30-day reoperation (p = 0.805) or home discharge (p = 0.315).

The results of this study suggest that undiagnosed OSA, as assessed via the STOP-Bang questionnaire, is a significant predictor of patient health status and readmission risk in the brain tumor craniotomy population. Further investigations should be undertaken to apply this prediction tool in order to enhance postoperative patient care to reduce the need for unplanned readmissions ¹⁾.

¹⁾

Caplan IF, Glauser G, Goodrich S, Chen HI, Lucas TH, Lee JYK, McClintock SD, Malhotra NR. Undiagnosed obstructive sleep apnea as a predictor of 30-day readmission for brain tumor patients. J Neurosurg. 2019 Jul 19:1-6. doi: 10.3171/2019.4.JNS1968. [Epub ahead of print] PubMed PMID: 31323636.

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