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Title: The diagnostic value of self-reported symptoms for the detection of sleep apnea syndrome in stroke patients

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Body: Introduction: sleep apnea syndrome (SAS) is a common sleep disorder in stroke patients and associated with decreased functional recovery, increased risk of recurrent stroke and mortality. Despite the high prevalence and poor functional outcome no guidelines for SAS screening in stroke rehabilitation are available. Objective: this study evaluated the predictive value of a self-report symptom questionnaire, socio-demographic and clinical variables for detection of stroke patients with a high risk of SAS. Methods: 306 stroke patients were screened with pulse-oximetry to determine their oxygen desaturation index (ODI). An ODI ≥ 15 was classified as a high risk of SAS. Potential predictors included socio-demographic variables, disease characteristics and self-reported symptoms (snoring, apneas, restless legs, morning headaches, waking up feeling unrefreshed, daytime sleepiness, falling asleep during daytime, fatigue, concentration loss, irritability and mood changes). With univariate logistic regression analysis, the associations between potential prognostic indicators and the primary outcome of ODI \geq 15 were examined. Significant variables (p-value ≤ 0.20) were selected for a backward multivariate logistic regression and checked for co-linearity. Results: a high risk of SAS was predicted by gender, body mass index, systolic blood pressure and the presence of the self-reported symptoms apneas, falling asleep during daytime and concentration loss. Conclusion: the diagnostic value of self-reported SAS symptoms alone is very low in stroke patients. Therefore, socio-demographic and clinical variables should be included in the screening of SAS in stroke rehabilitation.