

OSACS score - a new simple tool for identifying high risk for obstructive sleep apnea syndrome based on clinical parameters

To the Editor,

Herein we comment on the article by Szymanski et al. (1) entitled "OSACS score-a new simple tool for identifying high risk for Obstructive Sleep Apnea Syndrome based on clinical parameters." published in *Anatol J Cardiol* 2015; 15: 50-5. They proposed a scoring system based on clinical and echocardiographic data to screen the risk of obstructive sleep apnea (OSA) immediately after an acute coronary syndrome (ACS) episode. The authors identified independent risk factors using clinical and echocardiographic parameters in a logistic regression model. Additionally, all risk factors were used to create a final model to predict OSA risk among ACS patients.

OSA diagnosis and treatment are important procedures for the secondary prevention of cardiovascular diseases. OSA independently increases the risk of ACS, and majority of ACS patients develop OSA as a comorbidity (2). Glantz et al. (3) evaluated 662 patients undergoing percutaneous coronary revascularization. They found that OSA, defined as an apnea-hypopnea index equal to or greater than 15/h (moderate to severe cases), was found in 422 (63.7%) patients. This prevalence was higher than hypertension (55.9%), obesity (body mass index ≥ 30 kg/m²; 25.2%), diabetes (22.1%), and current smoking (18.9%) (3).

However, OSA gold standard diagnosis by polysomnography is rarely available in hospital settings and cost ineffective by means of general screening tool, which brings relevance for diverse proposals to stratify the risk of OSA, offering more effective resources for an appropriate and selective strategy to decide which patient should be submitted for the complete diagnostic procedure.

Hence, we value the authors' initiative for the development of this screening tool to identify a high risk of OSA among ACS patients. Previous OSA screening tools, such as the Berlin questionnaire and overnight auto-CPAP with low pressure for the identification of apnea-hypopnea index through its algorithm, have been tested in similar settings (4). The Berlin questionnaire depends on subjective data derived from the patients' self-reports. A more precise decision-making process can be achieved using objective information as used by this investigation, which built a prediction model based only on clinical and echocardiographic parameters, achieving a high accuracy level.

Future studies may consider a subsequent analysis to assess multicollinearity in the regression models for defining the OSACS score predictors. Most independent variables included in the OSACS score are possibly correlated with each other, which can influence the model's robustness, reducing the capacity of some potential predictors to significantly explain the high risk for OSA. As an example, obesity (BMI > 30 kg/m²) is associated with the risk of both ACS and OSA, regardless of other predictors (5).

This study presents a promising tool for the stratification of OSA risk in patients with cardiovascular disease. Because clinical and echocardiographic data from hospitalized ACS patients are easily available, the screening process has low cost and no adverse effects. We encourage the design of future studies addressing the validity of this new score in other populations across different settings and the inves-

tigation of whether OSA presence and its effective treatment impact ACS severity and extension of myocardial lesions.

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