

Author`s Reply

To the Editor,

Obstructive sleep apnea (OSA) is one of the sleep disorders highly prevalent in the general population and is more often found in men. In many cases it is associated with daytime sleepiness. OSA is not an isolated disease, but it directly affects the risk of development of other various conditions and their future course. Most of all, it is a negative prognostic factor for cardiovascular risk. In the general population, OSA has been linked to a number of conditions of the cardiovascular system, including heart failure, coronary artery disease, myocardial infarction, arrhythmias, pulmonary hypertension, stroke, insulin resistance, metabolic syndrome, prothrombotic state, erectile dysfunction, etc. (1) Recent studies suggest that OSA is a stronger predictor of coronary heart disease than the classical, well-established risk factors (2). Moreover, OSA is a predictor of a negative outcome in patients with established cardiovascular disease. As in patients after ST-elevation myocardial infarction, a population of patients in whom the concept of OSAS score was designed and initially tested (3). The risk described above is easily modifiable with proper treatment. Continuous positive pressure therapy is currently one of the most effective ways of OSA treatment and is able to not only improve the OSA control and daytime symptoms but also partially reduce OSA consequences such as hypertension.

Despite its high prevalence and well-described role in the pathogenesis of cardiovascular disease and its relatively easy treatment, OSA remains largely underdiagnosed. This is a problem especially in patients at a high cardiovascular risk. In a recent study conducted in a population of patients with diabetes mellitus, only 4.2% of the patients were treated for OSA, while the disease was diagnosed in twice as many patients (8.5%); however, the symptoms of daytime sleepiness were reported by as much as 16% of the entire study population. Only approximately 1 in 3 patients with daytime symptoms previously underwent a diagnostic evaluation (4).

The editorial comment on our article "OSACS score - a new simple tool for identifying high risk for Obstructive Sleep Apnea Syndrome based on clinical parameters" provides additional view on some issues addressed in the paper and considers important topics. New OSA risk scores such as OSACS are capable of improving the early diagnosis of the disease. Questionnaires such as the Berlin questionnaire or Epworth Sleepiness Scale were proven to be useful and cost effective. They are also helpful in everyday clinical practice where more advanced screening methods including polysomnography are less available. As it was emphasized in the article, the OSACS score is different from the other scales because it is the first one to be solely based on objective clinical parameters and not subjective symptoms. Moreover parameters included in the OSACS score such as left ventricular mass index, diastolic diameter, intraventricular septal thickness, blood pressure, and body mass index are routinely obtained in acute coronary syndrome patients in whom the scale was addressed. Calculation of the OSACS score does not require any additional diagnostic work-up from the physician; therefore, it is easy to perform and use.

As the Editors stated, the OSACS score needs validation in an external cohort, maybe also in a general population, not only patients with acute coronary syndrome. The external validation would improve the significance of the score and confirm its utility. Nevertheless, all the parameters used in the score were previously described in other studies to be associated with OSA. The first factor, obesity and hypertension (particularly resistant), are one of the most often described OSA predictors, and an increase in body mass is associated with the rising severity of OSA. Additionally, left ventricular geometry is altered in OSA. Some studies show that OSA affects ventricular geometry irrespective of obesity (5). Increased blood pressure values were also described to be independently associated with OSA in numerous studies.

In conclusion, the OSACS score is a non-invasive, simple, and promising tool that may be useful in identifying OSA in acute coronary syndrome patients and in the future, possibly other groups of patients. After external validation, the OSACS score may help in the wider recognition of OSA as a non-classical risk factor. It may help improve the prognosis of patients and therefore reduce the burden of cardiovascular disease.

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References

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