



## Letter to the Editor

## No atrial fibrillation, no histologic findings but even no obstructive sleep apnea?



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#### Dear Editors,

With great interest we read the challenging paper by van Oosten et al. [1] who report on histological findings in right atrial musculature in patients undergoing coronary bypass grafting and their potential association with obstructive sleep apnea. As they summarize, there were no differences between patients at high or at low risk for OSAS, implicating that OSAS might not be associated with morphologic changes in the right atrium.

In this context, we would like to give some comments:

- 1) As it is noted by the authors, they made a risk evaluation for the presence of OSAS using the Berlin questionnaire [2]. Therefore there is a mismatch in diagnostic accuracy between high sophisticated histological analysis and a questionnaire which just deals with clinical risk evaluation. To tell the truth, authors could not really know, if the patients have sleep apneics, and if, they could not appreciate severity of breathing disorder. As it was shown by Gami et al. [3] the severity of sleep apnea is associated with incidence of atrial fibrillation. Consequently, one might assume that structural changes might be associated with severity of OSAS. This fact could not be addressed by the authors because of the study protocol.

- 2) Atrial fibrillation is common in OSAS with an incidence of 14% in a mean follow-up of 4.7 years [3], contrary OSAS is much more frequently found in patients with atrial fibrillation, with a prevalence of about 50% [4]. Until now, it is not possible to predict, which patient will develop atrial fibrillation and which will not. Severity of OSAS probably plays a role. One might consider hypoxia, oxidative stress, endothelial dysfunction, adrenergic stimulation due to apnea or intrathoracic pressure swings as important pathomechanism [4] leading to atrial remodeling with consecutive electrical instability. Since patients with atrial fibrillation were excluded from the study, one might speculate, why there should be morphologic alterations.

However, until today there is a multitude of reports dealing with interactions and associations between OSAS and the heart, mostly based on epidemiological or clinical studies. Therefore, we congratulate the authors on taking a step forward in this pathophysiologic interesting and clinically important field.

#### Conflict of interest

Authors declare no conflict of interests.

#### References

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