Answers to reviewers comments

November 12, 2014-11-15

Dear Editor,

We appreciate the reviewers' comments very much as they have led to an improvement of the paper. We have addressed all questions and remarks carefully.

Changes in the manuscript are written in red.

Please find enclosed the edited manuscript in Word format (file name: 2429-review.doc).

Title: Trauma and syncope – evidence for further sleep study? A case report
Author: **Erik Skobel,** Andreas Bell, Dang Quan Nguyen, Holger Woehrle, Michael Dreher

Name of Journal: *World Journal of Cardiology*

ESPS Manuscript NO: 13874

The manuscript has been improved according to the suggestions of reviewers:
1 Format has been updated

2 Revision has been made according to the suggestions of the reviewer

Reviewer 00214290	We thank the reviewer for the positive comments and the recommendation for priority publishing.
Reviewer 00608197: This is a nice case report on an important clinical issue of heart rhythm disturbances in patients with sleep apnea (SA). It is important for clinicians to recognize the link, and to be aware of the necessary steps to diagnose SA. Nevertheless, there a certain flaws in the manuscript that need to be taken care of before publishing. 1. Abstract: It need to be specified whether the patient had a	Thank you for these helpful comments and the evidence of further diagnostic in SA. 1. The patient had a history of paroxysmal atrial fibrillation. We changed it in the manuscript. 2. "Onset of arrhythmia" – the character of heart rhythm disturbance is now

history of paroxysmal or sustained (chronic) atrial fibrillation (AF). 2. Abstract: "onset of arrhythmia" - the character of heart rhythm disturbance needs to be specified. 3. Case report: Body mass index should be reported 4. If there is an information on the type of seizures in the patient's history, it should be provided 5. Here again specification of AF should be provided whenever AF is mentioned 6. Importantly, 2 channel polygraphy is not a standard method even for screening for SA. Basically, the authors performed only screening oximetry and ECG recording. This is a major drawback of the case report. Nevertheless, it might not obscure publishing if authors make a clear point on this limiting aspect in the discussion. 7. Based on oximetry, the authors can not make a diagnosis of obstructive SA. Therefore, "obstructive" should be strictly avoided. Also, again, I would suggest to make a clear comment on that the patient might have suffered either from obstructive or from central, or from both SA (for review see papers by Bradley TD, Tkacova R). This is relevant especially in a patient with a cardiac comorbidity - which is the present case.	better specified. 3. BMI – the Body Mass Index has been added to manuscript. 4. type of seizures – addiotional remarks were added to the manuscript. 5. specification of AF – we added additional specification in the manuscript whenever AF is mentioned 6. Missing polysomnography data - Not only 2-channel polygraphy for screening was performed. After pacer implement polysomnography was performed with diagnostic of OSA. The data is available in table 1. This has now been clearly stated in the manuscript. 7. Diagnostic of OSA – We thank for this helpful comment. As polysomnography was performed after pacer implementation, diagnostic of OSA was clearly possible. This has been added to the manuscript. 8. Further references have been added to the manuscript: 4. Bradley TD, Floras JS. Obstructive sleep apnoea and its cardiovascular consequences. Lancet. 2009;373(9657):82-93. doi:10.1016/S0140-6736(08)61622-0. 10. Parati G, Lombardi C, Hedner J, Bonsignore MR, Grote L, Tkacova R et al. Position paper on the management of patients with obstructive sleep apnea and hypertension: joint recommendations by the European Society of Hypertension, by the European Respiratory Society and by the members of European COST (COoperation in Scientific and Technological research) ACTION B26 on obstructive sleep apnea. Journal of hypertension. 2012;30(4):633-46. doi:10.1097/HJH.0b013e328350e53b. 12. Tkacova R, McNicholas WT, Javorsky

	M, Fietze I, Sliwinski P, Parati G et al. Nocturnal intermittent hypoxia predicts prevalent hypertension in the European Sleep Apnoea Database cohort study. The European respiratory journal. 2014;44(4):931-41. doi:10.1183/09031936.00225113.
Reviewer 00504181: This manuscript reports a typical case of sick sinus syndrome in an 83-year-old male, with paroxysmal atrial fibrillation and sinus arrest, presenting clinically with syncope. The patient had also obstructive sleep apnea. As the authors point out, these two conditions not only co-exist often in elderly populations, but they may be also causally interrelated. However, the absence of recurrent syncope during follow up (the duration of which is not clear) after permanent pacemaker implantation without concurrent CPAP treatment, indicates that the main cause of syncope in the patient was sick sinus syndrome. Thus, the main point of this report, namely the participation of obstructive sleep apnea in the pathogenesis of syncope is not justified. In addition, the description of the diagnostic evaluation followed in this patient in incomplete; specifically, the authors state that 'Further evaluation of syncope showed no abnormalities' without explanation of its nature, e.g., carotid sinus massage, tilting test or electrophysiologic study.	We thank the reviewer for the good point and helpful comments. The main reason for syncope was sick sinus, but the occurrence of paroxysmal AF during the night as in this case associated with SA was may one reason for seizures in the morning. Here sleep diagnostics was helpful to perform further diagnostics (24-h-ECG) to evaluate occurrence of paroxysmal AF or other arrhythmias during the day. So diagnostic of SA was helpful to evaluate the reason for syncope again. The reviewer is absolutely right that evaluation of syncope needs more diagnostics based on current guidelines that had to be performed before rehabilitation. This is now added to the manuscript.

3 References and typesetting were corrected

Thank you again for publishing our manuscript in the *World Journal of Cardiology.*
Sincerely

Dr. Erik Skobel
Clinic for Cardiac and Pulmonary Rehabilitation, "An der Rosenquelle"

Kurbrunnenstraße 5, 52077 Aachen, Germany
Telephone: +49-241-6007-501; **Fax**: +49-241-6007-502;
E-mail: erik.skobel@rosenquelle.de