

## Answer to “On the importance of polysomnography after stroke”

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Dear editor,

Thank you for your interest in our paper entitled “Polysomnographic indicators of mortality in stroke patients”.

We agree with you that the use of scales assessing sleepiness in stroke patients requires more or less intact language and cognitive function. A significant number of patients will be unidentified if history alone is used as a screening method for sleep-related breathing disorders (SRBDs) in stroke patients. A meta-analysis showed that 25 % of patients with SRBDs and stroke were not habitual snorers. Even with severe SRBDs, symptoms are not given [1].

Furthermore, we share your point of view that screening of SRBDs in stroke patients is important but difficult. Actigraph measurements can be used for determination of circadian activity but has no place in determination of sleep or SRBDs in stroke patients.

There are several obstacles in the implementation of SRBD screening of stroke patients that are not easily overcome. The screening method must be simple enough to better the tolerance (i.e., minimize the risk of removal of equipment by cognitively impaired patients) during the long recording period (at

least overnight) and diminish time-consuming setup and scoring. Furthermore, the screening method needs to be applicable to patients with severe strokes and impaired levels of consciousness; it must be manageable by several staff members and must be practical in clinical settings with concurrent diagnostic procedures (e.g., MRI/CT scan). At the same time, oversimplification of the method may render it inconclusive in many cases. An example is the home sleep apnea testing (HSAT), where the arousals cannot be scored due to the lack of an EEG, and therefore patients with severe sleep fragmentation due to RERAs may be overlooked.

Therefore, we need studies addressing the development of highly tolerable, easy-managed, and robust screening tools. Screening for SRBDs should be offered to stroke patients and patients with transient ischemic attacks as part of the standard stroke protocol.

### Compliance with ethical standards

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**Conflict of interest** The authors declare that they have no conflict of interests.

**Ethical approval** Not relevant for this letter as no participants were included.

**Informed consent** Not relevant for this letter as no participants were included.

### Reference

1. Johnson KG, Johnson DC (2010) Frequency of sleep apnea in stroke and TIA patients: a metaanalysis. *J Clin Sleep Med* 6(2):131–137

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