Reviewer's report

Title: Identification of the occurrence and pattern of sleep bruxism using EMG and accelerometer systems

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Reviewer: Ulrich Meyer

Reviewer's report:

Yoshimi and coworkers assessed jaw movements during sleep in adults using accelerometers, EEG and EMG. Based on their findings, the authors conclude that accelerometer is useful for the detection of jaw movements during sleep.

Although interesting for its topic, this paper could be improved by detailing the following aspects.

- Inclusion and exclusion criteria of the subjects
- Description of the subjects (eg, were they bruxers?)
- Calibration data of the accelerometer when measuring jaw movements
- Purposes of the use of EEG and video (eg, no sleep data was presented)
- Reasons for using 5% MVC criteria for detecting ‘bruxism'
- Validation data on the bruxism-analyzing software
- Actual number of motor events
- Lack of statistical evaluation to validate the ACC analysis and to assess physiological range
- Methodological information in the results section, and repetition of results in the discussion

Improving this points help readers to understand the significance of the physiological range of bruxism.

Many papers on the techniques for detecting bruxism have been published. Previous works should be discussed especially those who give contemporary definitions of sleep bruxism, causal effects on temporomandibular joint and muscle disorders.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests