

MEETING ABSTRACT

Open Access

# EHMTI-0150. A controlled study of sleep in cluster headache patients.apo04

M Barloese<sup>1\*</sup>, P Jennum<sup>2</sup>, N Lund<sup>1</sup>, R Jensen<sup>1</sup>

From 4th European Headache and Migraine Trust International Congress: EHMTIC 2014 Copenhagen, Denmark. 18-21 September 2014

## Background

Cluster headache (CH) is a primary headache disorder characterized by notoriously severe attacks of unilateral pain following a chronobiological pattern. There is a close connection with sleep as many attacks occur during the night and a complex hypothalamic involvement has been suggested.

## Aim

To investigate sleep in a large, well-characterized population of CH-patients and compare our findings to those in healthy controls.

## Methods

We performed polysomnography (PSG) for two nights in 40 CH patients during active bout and for one night in 25 age, sex and BMI-matched controls on an in-hospital basis. Clinical headache characterization was obtained through a semi-structured interview.

## Results

A total of 99 nights of PSG were analyzed. Our main finding was a reduced percentage of REM-sleep ( $P < 0.01$ ), longer REM-latency ( $P < 0.01$ ) and fewer arousals ( $P < 0.01$ ) in CH patients. There was no difference in the prevalence of sleep apnea between patients (38%) and our matched controls (32%) although numerically patients had a higher mean apnea-hypopnea index (10.75 vs. 4.93). We observed 45 nocturnal CH attacks but no temporal association with particular sleep stages.

## Conclusions

To date, this is the largest study of sleep in CH. REM-sleep is affected in CH which is in line with our current understanding of CH and newer studies indicating

hypothalamic involvement in the regulation of this sleep stage. Further, we found fewer arousals in CH-patients as has been demonstrated in other headache disorders. Together, the findings support a central role of the hypothalamus and arousal systems in CH.

No conflict of interest.

## Authors' details

<sup>1</sup>Neurology, Danish Headache Center, Glostrup, Denmark. <sup>2</sup>Neurology, Danish Center for Sleep Medicine, Glostrup, Denmark.

Published: 18 September 2014

doi:10.1186/1129-2377-15-S1-E13

Cite this article as: Barloese et al.: EHMTI-0150. A controlled study of sleep in cluster headache patients.apo04. *The Journal of Headache and Pain* 2014 15(Suppl 1):E13.

## Submit your manuscript to a SpringerOpen<sup>®</sup> journal and benefit from:

- Convenient online submission
- Rigorous peer review
- Immediate publication on acceptance
- Open access: articles freely available online
- High visibility within the field
- Retaining the copyright to your article

Submit your next manuscript at ► [springeropen.com](http://springeropen.com)

<sup>1</sup>Neurology, Danish Headache Center, Glostrup, Denmark  
Full list of author information is available at the end of the article