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Sleep Disorders 1
Antidepressant-induced sleep bruxism: Prevalence, incidence, and related factors

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Background: The relationship between sleep bruxism and antidepressant drugs in patients remains unclear.
Objective: In this study, we aimed to investigate the incidence rate of antidepressant-related bruxism, and to examine whether or not antidepressant use is associated with this side effect in the patients.
Patients and methods: The study sample was gathered from 2 hospitals. A total of 807 patients who met the criteria of inclusion were included in the study. The sample was divided into 2 groups: antidepressant group (n = 506) and the control group (n = 301). The sleep bruxism was established with reports from the study participants on the basis of the International Classification of Sleep Disorders: Diagnosis and Coding Manual Second Edition.
Results: The prevalence of bruxism was significantly higher in the antidepressant group (24.3%) than the control group (15.3%). The incidence of antidepressant-induced bruxism was 14.0%. The antidepressants most associated with bruxism were paroxetine, venlafaxine, and duloxetine. The patients experiencing antidepressant-induced bruxism had higher age compared to those who did not suffer from this side effect.
Conclusions: The results of the present study suggest that bruxism are frequently observed in women taking antidepressants and that it appears to be associated with antidepressant use at least in some patients.

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Sleep Disorders 1
Improvement on serum testosterone levels with obstructive sleep apnea (OSA) treatment. Preliminary analysis

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Introduction: Neuroendocrine secretion is regulated by sleep. OSA can impair hormone secretion with a decrease in pituitary function and morning serum testosterone levels. This can affect negatively libido and fertility. There is a paucity of studies evaluating this.
Methods: Ambulatory males (20 to 50 years-old) were consecutively recruited from a Sleep Disorder Clinic, between August and December 2012. All underwent a clinical and anthropometric evaluation, a Epworth Sleepiness Scale (ESS), and polysomnography (PSG). We selected subjects with OSA defined as an apnea-hypopnea index (AHI) ≥5/h. Subjects with diabetes; hypothyroidism; pituitary tumors; morbid obesity and on chronic steroid treatment were excluded. We included 31 subjects of which 8 (25.8%) completed the study. Six were treated with CPAP and two with oral appliances. Sex hormone binding globulin (SHBG) protein, total and free testosterone levels were measured at baseline and at three months of OSA treatment.
Results: We studied 8 subjects of mean age 43. Mean BMI 31.3. Mean AHI 47.3, events/h. Hormone levels at baseline and follow up were: Total testosterone 228.1 ng/ml and 259.1 ng/ml (p = 0.012); free testosterone 7.4 pg/ml and 9.2 pg/ml (p = 0.012); SHBG 15.3 nmol/lt and 17.4 nmol/lt (p = 0.05). Baseline ESS was 15.2. On follow up ESS was 3.2 (p = 0.018). BMI did not change significantly (p = 0.553).
Conclusion: A significant increase in SHBG protein, total and free testosterone levels was observed after 3 months of treatment of OSA. This suggests that the improvement on libido reported on subjects treated with CPAP could be related to the increase in serum hormone levels and decrease in subjective daytime somnolence.

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Sleep Disorders 1
Quantitative analyses of REM sleep without atonia in patients with voltage gated potassium channel antibody syndrome

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Background: Voltage-gated potassium channel antibody syndrome (VGKC-AS) is an autoimmune disorder with prominent neurological and sleep disturbances, including limbic encephalitis (LE) and REM sleep behavior disorder (RBD). We analyzed REM sleep without atonia (RSWA) in VGKC-AS patients.
Design: We comparatively analyzed RSWA between VGKC-AS patients (n = 18) with (n = 7) and without (n = 11) RBD, controls, and RBD (n = 18) without VGKC-AS. REM muscle activity was compared in the submentalis (SM) and anterior tibialis (AT) muscles, and the automated REM atonia index (RAI) was calculated. Statistical

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analyses involving group comparisons and regression were then performed. Analyses for Lgi-1 (Leucine-rich, glioma inactivated 1) and Caspr-2 (Contactin-associated protein-like 2) antibodies were also performed.

Results: Seven (39%) VGKC-AS patients had RBD, including 5 (71%) men. VGKC-AS patients had intermediately higher RSWA, higher than controls but lower than traditional RBD patients ($p < 0.05$). LE patients had higher phasic muscle activity in AT ($p = 0.03$). VGKC-RBD patients had higher tonic muscle activity than those without dream enactment ($p = 0.03$). Only 3/18 (17%) VGKC patients were Lgi-1 positive and all 18 were Caspr2 negative. No associations between Lgi-1 and RSWA were found.

Conclusions: VGKC patients had higher overall RSWA than controls, but lower than traditional RBD patients. VGKCAS-RBD patients had higher tonic RSWA than VGKC-AS patients without dream enactment, and LE patients had higher overall and leg phasic RSWA than other VGKC-AS patients. This data informs prompt diagnosis of VGKCAS-RBD, potentially enabling immunomodulation. Future prospective research is needed to analyze immunotherapy impact on VGKC-AS RSWA and clinical outcomes.

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Sleep Disorders 1
REM sleep without atonia predicts cognitive impairment in REM sleep behavior disorder

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Background. REM Sleep Behavior Disorder (RBD) is a potentially injurious parasomnia that is strongly associated with synucleinopathy. Patients with RBD exhibit REM sleep without atonia (RSWA), the loss of normal muscle atonia during REM sleep, on polysomnography (PSG). We aimed to determine whether RSWA severity was associated with cognitive functioning in RBD.

Methods. Both idiopathic (iRBD) and symptomatic RBD (sRBD) patients completed two cognitive batteries: CNS Vitals Signs (CNS-VS) and Useful Field of View (UFOV). All subjects underwent PSG and their muscle (SM: submentalis; AT: anterior tibialis) tone during REM sleep was visually and automatically scored. Group differences between sRBD and iRBD were then compared, and regression models fit to determine the relationship of RSWA and dependent cognitive measures.

Results. Twenty iRBD and 10 sRBD participated. Demographics were similar between groups.

Deficits on cognitive testing were observed on CNS-VS in processing speed ($p = 0.014$) and psychomotor speed (sRDB < iRBD, $p = 0.019$) and on Total UFOV and subtests 2 and 3 (sRBD > iRBD, all $p < 0.002$). sRBD patients had greater combined phasic and tonic RSWA in SM ($p = 0.026$) and longer mean phasic burst duration ($p = 0.03$). Regression analyses demonstrated that SM RSWA independently predicted overall CNS-VS Neurocognitive Index (NCI) ($F = 4.5$, $p = 0.006$), adjusting for age, gender, depressive symptoms (Zung Score), and sleep disturbances (PSQI), and this relationship also remained significant in the iRBD group after excluding sRBD patients ($F = 3.5$, $p = 0.03$).

Conclusions. RSWA is predictive of lower overall cognitive performance in patients with RBD.

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Sleep Disorders 1
Sleep patterns and risk of cognitive impairment in hypertensive patients in Yaounde, Cameroon, Sub-Saharan Africa

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Background/objectives: Sleep disorders predispose to hypertension but little is known on the effect of hypertension on sleep patterns and cognitive function in Sub-Saharan Africa. In this study we sought to describe sleep patterns and determine the risk of cognitive impairment in hypertensive subjects (HTS) in Yaoundé- Cameroon.

Methods: We carried out a case-control study involving HTS and age- and sex-matched normotensive subjects (NTS), screening for sleep quality and risk of cognitive impairment using the Pittsburgh Sleep Quality Index (PSQI) and the International HIV Dementia Scale (IHDS) respectively. Informed consent was obtained from each participant and clearance obtained from the Faculty IRB. Data were compared between both groups.

Results: In total 50 HTS and 54 age- and sex-matched NTS were enrolled. HTS were significantly "poor sleepers" (global PSQI > 5, $p = 0.016$), "short sleepers" (<5 h, $p = 0.027$) than NTS. After adjusting for BMI, there was a significant association between sleep quality (aOR = 4.18, $p = 0.005$), and Hypertension. In all, 11.1% of HTS had a higher risk of dementia (IHDS < 10) against 1.9% of NTS ($p = 0.07$). There was no clear sleep trend observed with respect to the severity of hypertension (JNC8 classification).

Conclusion: Sleep quality and sleep duration were poorer and shorter respectively and the risk of cognitive impairment higher in HTS than in NTS.

Keywords: Sleep disorders, hypertension, cognitive impairment.

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Sleep Disorders 1
Sleep related breathing disorders in patients with chronic cerebrovascular diseases

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The purpose of scientific research: Analysis of the parameters of respiratory disorders during sleep in patients with chronic cerebrovascular disease by polysomnography. Increase in the effectiveness of treatment and rehabilitation of patients with chronic cerebrovascular disease and sleep disorders through the use of CPAP-therapy for elimination of respiratory disturbances during sleep.

Material and methods: 183 patients took part in our investigation: Male 133 (72.7%), Female 50 (27.3%) Age average — 58.4. Severity: cerebrovascular insufficiency 74, encephalopathy 1–54, encephalopathy 2–55.

Comorbidities: Obesity 98, Coronary heart disease 51, Diabetes 10, Arterial hypertension 94. The objective parameters of sleep disorders were defined by polysomnography method. The quality of life was determined by the unspecific questionnaire SF-36.

Findings and academic novelty: It's been determined that the severity of cerebrovascular diseases statistically depends on all valued indicators of sleep related breathing disorders. Clinically and statistically relevant interconnection was obtained between the

degree of respiratory disorders during the sleep with lasting deep NREM-sleep periods ($p < 0.001$), the severity of chronic cerebrovascular diseases ($p < 0.001$), the presence of concomitant pathologies including obesity ($p < 0.001$),hypertension ($p < 0.001$),coronary heart disease ($p = 0.004$), diabetes mellitus 2 ($p = 0.006$). medical science data has been obtained that using the long-period CPAP-treatment of patients with chronic cerebrovascular diseases can eliminate respiratory disorders ($p < 0.001$), bring sleep architecture back to normal (by increasing the periods of deep NREM-sleep continuity ($p < 0.001$)), increase the quality of sleep, improve the efficiency of treatment, contribute to the improvement of the quality of life and the rehabilitation of patients.

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Sleep Disorders 1
Social support and sleep disturbances in male population 45–69 years in Russia/Siberia (epidemiological study)

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Objective: To determine the prevalence of social support (indices of close contacts (ICC) and social network (SNI)) in male population aged 45–69 years with violations of quality and duration of sleep in Russia/Siberia (Novosibirsk).
Methods: Under the screening random representative sample of men aged 45–69 years ($n = 1770$) were surveyed in Novosibirsk. Berkman-Sym test was used to measure social support. Sleep disorders studied by the test C.D. Jenkins et al. (JSQ).
Results: The prevalence of high and very high level of SNI was in 15.8% and 2.3% of population, respectively. ICC was high in 7.2%. SNI, and ICC Indices in the analysis by age groups were similar and are not associated with age. At a low level SNI more common persons with severe sleep quality (22.4%) than with high or very high levels (14.7% and 19.5%, respectively). Disturbances of sleep duration remain approximately the same as in those with high level SNI (56.1%), and as with low (55.4%). Sleep quality is much worse than in men with low levels of ICC (20.3%), than with a high ICC (14,1%). Severe disorders of sleep duration in men with high or low levels of ICC remain approximately the same (61.4% and 58.4%, respectively).
Conclusion: At low levels of SNI and ICC are more common persons with severe sleep quality. The expressed disturbances of sleep duration in men with high or low levels of SNI and ICC remain approximately the same.

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Sleep Disorders 1
Sleep disorders and their influence on the quality of life in haemodialyzed patients with chronic renal failure

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Background: Chronic Kidney Disease (CKD) has a worldwide high prevalence. Studies of patients who are on renal replacement therapy, found that 50–80% report excessive daytime sleepiness. Insomnia has been associated with a poor quality of life in these patients.
Objective: The aim of the study is to define the prevalence of sleep disorder and relationship between quality of life and day-schedule dialysis, serum calcium, K/tv rate and systemic inflammatory condition (measured by CRP) CKD in chronic haemodialysis patients.
Material and methods: Descriptive transversal study, includes patients with CKD Stage 5D on haemodialysis who were attended in our Hospital. Demographics variables were determined, aetiology of CKD, Epworth score (ES), CRP, serum calcium, K/tv rate and quality of life (measured by EQ-5D). All patients signed informed consent.
Results: Population consisted of 82 patients on regular dialysis (excluded 15). Average age was 50.8 ± 13.3 years and 54% were male. The main cause of CKD was hypertension. 21% of patients had more than 9 points in ES. The main cause was daytime sleepiness and Restless Legs Syndrome. There was no statistical association between the ES, CRP, k/TV rate and serum calcium. Patients on dialysis in afternoon had better ES that during the night (4.61 vs. 6.91 $p = 0.05$). There was a slight association between EQ5D and ES ($R^2 = 0.01$).
Conclusion: Sleep disorders have a low prevalence in our series. No relationship between daytime sleepiness and k/TV rate or serum calcium was found. There was a mild correlation between EQ5D and ES.

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