includes patients from 1999-2020 with a hospitalization for MI as the principal diagnosis. We confirm the OSA diagnosis using ICD9/10 codes. The primary outcome was in-hospital mortality during the index admission for acute MI. We reported the odds ratio (OR) of in-hospital mortality between with-OSA and without-OSA using logistic regression. We adjusted the OR (aOR) by age, gender, race, ethnicity, BMI, and Charlson Comorbidity index.

Results: Out of 4,237,444 veterans with any sleep diagnosis, 76,359 patients were hospitalized with a diagnosis of MI. We observed 30,116 with OSA (age, 64±10; BMI, 33±7) and 43,480 without OSA (age, 68±12; BMI, 29±6). The aOR of in-patient mortality was lower in with-OSA (n = 333[1.1%]; aOR, 1.86; 95% CI, 1.63 to 2.12) compared to without-OSA (n = 1,102[2.5%]; aOR, 2.02; 95% CI, 1.78 to 2.30). After stratifying the patients based on previous history of MI, the results remained the same.

Conclusion: We found that in patients admitted with acute MI, the OSA cohort was associated with lower mortality when compared to non-OSA cohort. We speculate that these differences may be attributed to IPC likely due to repetitive, chronic episodes of hypoxia in obstructive sleep apnea. Further research is warranted to elicit the clinical implications of ischemic preconditioning and OSA.

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SLEEP QUALITY AND ITS ASSOCIATION WITH INFLAMMATION OVER TIME IN PATIENTS UNDERGOING RADIATION THERAPY FOR HEAD AND NECK CANCER

Lichuan Ye[1], Andrew Miller[2], Deborah Bruner[3], Sudeshna Paul[3], Jennifer Felger[2], Evanthia Wommack[2], Kristin Higgins[2], Dong Shin[2], Nabil Saba[2], Canhua Xiao[3]

Northeastern University | Bouvé College of Health Sciences | School of Nursing [1] Emory University School of Medicine [2] Emory University School of Nursing [3]

Introduction: Sleep disturbance is a prominent concern in patients with cancer with detrimental effect on health outcomes. Although inflammation has been proposed as a potential mechanism of sleep disturbance, there is a dearth of longitudinal data supporting the relationship between cancer-related sleep disturbance and inflammatory markers. The goal of this prospective longitudinal study was to examine the change in sleep quality and its association with inflammatory markers in patients undergoing radiation therapy for head and neck cancer.

Methods: A total of 176 patients who had head and neck cancer without distant metastases were assessed before, immediately after, and at 3 and 12 months after radiotherapy. Sleep quality was assessed by the Pittsburgh Sleep Quality Index (PSQI). Peripheral blood inflammatory markers were measured using standard techniques at the same four assessment times. Generalized estimating equations with exchangeable within-subject correlation matrix were used to analyze repeated measures.

Results: The participants were mostly middle-aged White (79.5%) men (74.0%) who were married or living with significant others (70.0%) and received concurrent chemoradiotherapy (80.1%). Using the PSQI of 5 as the cut-off, 66.3% of the participants were poor sleepers at baseline, and this rate increased to 82.8% immediately after, then dropped to 56.8% at 3 months and 46.2% 12 months after therapy. Being single (p=0.007), taking antidepressants (p=0.020), and with feeding tube (p=0.01) were identified to be significantly associated with poor sleep quality over time. Controlling for relevant demographic and clinical factors, changes in sleep quality were associated with changes of circulating levels of two inflammatory markers, C-reactive protein (CRP) and interlukin-1 receptor antagonist (IL-1ra). Increased CRP and IL-1ra levels were associated with higher PSQI global scores (beta=0.826, p=0.007 for CRP; beta=1.412, p=0.050 for IL-1ra), indicating worse sleep quality.

Conclusion: Patients with head and neck cancer experienced poor sleep quality, especially immediately after treatment completion and in those who were single, depressed, or with feeding tube. Inflammation is associated with cancer-related sleep disturbance and both sleep and inflammation may be potential targets to promote health outcomes in patients with cancer.

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CLINICAL PATTERNS OF OBSTRUCTIVE SLEEP APNEA PATIENTS IN COVID 19

ASHESHA MECHINENI[1], JESSICA GARDNER[2], HOWARD GORDON[2], BHARATI PRASAD[1]

University of Illinois Chicago [1] Jesse Brown VA Medical Center [2]

Introduction: Recent studies indicate Obstructive Sleep Apnea (OSA) patients have higher severity of respiratory compromise after COVID19 infection due to their sleep related hypoxemic burden. The pro-inflammatory state associated with OSA, sympathetic excitation, and recurrent hypoxemia may predispose to poorer post-COVID19 outcomes. We compared COVID19 infection outcomes in a cohort of hospitalized Veterans with and without OSA.

Methods: We used Jesse Brown Veteran Affairs Medical Center (JBVAMC) Registry for Research on Risk Factors and Outcomes of Veterans Evaluated for COVID19. The registry includes all patients who received a test for COVID19 at JBVAMC through November 8th,2021. Data are from the VA COVID19 Shared Data Resource and chart review, and include demographic data, pharmacological and non-pharmacological interventions, clinical outcomes, and pre-existing conditions. The study was approved by the Institutional review board (IRB). STATA v16 was used for data analysis.

Results: Of the 13,385 patients included in the registry, 1890 patients were found to have a positive COVID19 test, of which 625 were hospitalized and included in our study. The sample was older (mean age of 66.8 years), predominantly men (583, 93.3%) and African Americans (461, 73.8%). 18.7%(117, 18.7%) were European American, and (47, 7.5%) were of other race categories. The group with OSA was 37.8% (n=236) and without OSA was 62.2% (n=389) of the total sample. Elixhauser comorbidity index was higher in OSA group compared to those without OSA (p:0.00001, mean (SD): 16.73(14.6) vs. 12.03 (13.1)). Univariate analysis demonstrated a higher rate of readmission at 60 days (p=0.02, Odds ratio (95% CI): 1.69 (1.1-2.6)) and use of mechanical ventilation (p=0.05, Odds ratio (95% CI): 1.65 (0.99-2.75) in OSA vs. without OSA. These associations were attenuated in multivariate logistic regression models including age, gender, race, Elixhauser index and body mass index. OSA did not affect the length of stay or inpatient mortality.

Conclusion: In hospitalized COVID19 patients, OSA increases the probability of readmission and risk of mechanical ventilation, but this effect is likely due to higher comorbidity and obesity rates in OSA. In the future, we plan to examine larger samples of Veterans hospitalized with COVID19 and assess the effect of positive airway pressure treatment to understand the impact of OSA on COVID19 outcomes.
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THE IMPACT OF INTRACRANIAL EEG ON SLEEP IS INDEPENDENT OF WHETHER A CRANIOTOMY WAS PERFORMED

Kevin Tyner[1], Abdallah Alsammani[1], Garnett Hegeman[2], William Stacey[2], Stephen Gliske[1]
University of Nebraska Medical Center [1] University of Michigan [2]

Introduction: Patients with refractory epilepsy are often evaluated with intracranial electrodes prior to resection. While depth electrodes can be placed through small burr-holes, grids and strips generally require large craniotomies. We have observed many differences in patient experience between these two populations. As sleep is crucial for many aspects of health and healing, our objective was to quantify whether subjects with craniotomies had different sleep patterns.
Methods: We analyzed data from N=47 patients with refractory epilepsy who underwent intracranial EEG monitoring at the University of Michigan (N = 23 with craniotomies). Sleep stages were scored by a certified sleep technician using simultaneously recorded scalp EEG. To quantify sleep patterns, we computed the fraction and average bout-length of each state of vigilance.
Results: No statistical difference was found between subjects with or without craniotomies for any measure ($p>0.4$, Wilcoxon Rank Sum). The median fraction of time awake for all subjects was 0.70 (0.65-0.74, 95% confidence interval). However, sleep architecture appeared altered, with median fraction of sleep time in NREM 1 being 0.07(0.06-0.09), NREM 2 being 0.16 (0.13-0.17), NREM 3 being only 0.01 (0.0-0.2) and REM being 0.05 (0.04-0.06). The median bout lengths for all stages of sleep was less than 5 minutes.
Conclusion: Intracranial monitoring appears to alter sleep similarly for both subjects who received craniotomies and those who had smaller burr-holes. The impact on sleep is not a significant factor when deciding between grid or depth electrodes.
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SLEEP ATTITUDES AS A PREDICTOR OF RISK FOR METABOLIC SYNDROME IN COLLEGE FRESHMAN

Sophie Hirsch[1], Aria Ruggiero[1], Philip Zendels[1], Hannah Peach[1], Jane Gaultney[1]
UNC Charlotte [1]

Introduction: Transitions into adulthood and starting higher education can be a challenge in habit formation of first-year students. Unhealthy habits related to eating, exercise, substance consumption and sleep can lead to rapid weight gain and conditions such as metabolic syndrome. Research has suggested that regardless of sleep knowledge, favorable sleep attitudes predict better sleep. Thus, our aim was to investigate whether sleep attitudes directly predicted risk for metabolic syndrome or indirectly via subjective and objective sleep measures.
Methods: First year college students (N=165) completed self-report measures and were brought into the lab for height, weight, body fat, blood sugar and fats, and blood pressure analyses. Participants wore FitBit Flex wristwatches to collect sleep data for seven consecutive days. Preliminary correlational analyses were conducted on sleep and obesity measures. Two separate path analyses were conducted to investigate whether there was a direct effect of sleep attitude on risk for metabolic syndrome or indirect via subjective sleep (sleep quality, duration and apnea) and objective sleep (sleep efficiency, duration and apnea). Two moderated mediations were conducted to investigate the effects of gender and age.
Results: The average age was 18.66 (SD=3.33) with the majority of the sample being female (63%) and White (55.9%). In our subjective sleep analysis, we found that sleep attitudes predicted quality and duration, but not apnea, and that the overall model yielded significance. In our objective model, only apnea was a significant predictor, as well as the overall model. The indirect relationships were not moderated by gender or age.
Conclusion: Poor sleep attitudes are related to risk for metabolic syndrome in college aged individuals. Future studies should further examine sleep attitudes as a modifiable risk factor to prevent disease.
Support (If Any): NA

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SLEEP PATTERNS AND "OFF"-TIME IN PATIENTS WITH PARKINSON'S DISEASE AND MOTOR FLUCTUATIONS

Robert Hauser[1], Aleksandar Videnovic[2], Patrício Soares-da-Silva[3], Grace Liang[4], Kurt Olson[4], Eric Jen[4], José-Francisco Rocha[3], Olga Klepitskaya[4]
University of South Florida [1] Harvard Medical School [2] BIAL – Portela & Ca S.A. [3] Neurocrine Biosciences, Inc. [4]

Introduction: Sleep disruptions in patients with Parkinson's disease (PD) include difficulty falling/staying asleep, which can contribute to daytime sleepiness and overall worsening of health, mood, and quality of life. Although sleep disturbances in PD are multifactorial, nighttime motor symptoms can negatively affect sleep. To better understand how "OFF"-episodes affect sleep, post-hoc analyses were conducted using baseline data from two phase 3 studies of opicapone, an approved once-daily adjunctive treatment to levodopa/carbidopa (LD/CD) in patients with PD experiencing motor fluctuations.
Methods: In BIPARK-1 and BIPARK-2, participants recorded sleep/awake periods, "OFF"-time, and "ON"-time in 24-hour PD diaries. Sleep metrics included sleep duration, awakenings after sleep onset, and percent of sleep time spent awake. "OFF"-times included "OFF" before sleep (OBS), nighttime "OFF" (NTO), and early morning "OFF" (EMO). Data at baseline were pooled across treatment groups and analyzed descriptively. Mean values are presented with standard deviations (±SD).
Results: Baseline data from 1010 participants were pooled for analysis. Among 964 participants with available sleep metrics, mean total sleep duration was 7.6 (±1.5) hours and longest duration of uninterrupted sleep was 7.2 (±1.9) hours. 332/964