ABSTRACTS

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Conclusions: TSA is related to the amelioration of obstructive sleep apnea (OSA) in patients with acromegaly. Despite the associations between cardiovascular and sleep parameters, only minor changes in cardiovascular parameters after TSA were detected within one year of observation.

Disclosure: Nothing to disclose.

P105 | CPAP adherence trajectories in obstructive sleep apnea - unsupervised clustering using real-life datasets

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Objectives/Introduction: Daily CPAP tele-monitoring generates every night an avalanche of individual data from million patients on long term home treatment. This might be used to adapt personalized patient's management. The aim of the current study was to identify distinct clusters of CPAP adherence trajectories during the first 3-months after CPAP initiation.

Methods: We used 3-month daily CPAP telemonitoring adherence and clinical phenotyping data from university hospital of Grenoble. Unsupervised clustering methods based on ascending hierarchical clustering was used to identify 3-month CPAP adherence trajectories, based on dynamic time warping dissimilarity.

Results: From a dataset of 745 OSA patients, six distinct clusters of CPAP adherence trajectories were identified. Three clusters corresponded to stable trajectories but with different levels of CPAP adherence: 1) Cluster 1 (N = 302, 40%): stable CPAP adherence trajectory with fluctuations between 4 and 6 hours/night, 2) Cluster 2 (N = 168, 23%): stable CPAP adherence trajectory with fluctuations between 6 and 8 hours and 3) Cluster 3 (N = 42, 6%): Highest CPAP adherence trajectory with stable adherence above 8 hours by night. Three clusters were labeled as unstable clusters with 1) Cluster 4 (N = 53, 7%) high CPAP adherence in the first month after CPAP initiation and then abrupt adherence decrease or a stopping treatment, 2) Cluster 5 (N = 86, 11.5%): low adherence trajectory (less than 4 hours by night) with progressive descending of CPAP adherence and 3) Cluster 6 (N = 94, 13%): Non- adherence starting in the first days after CPAP initiation.

Conclusions: Using unsupervised clustering with dynamic time warping allowed identifying distinct CPAP adherence trajectories in the first 3-months after CPAP initiation. This knowledge might guide personalized intervention facilitating allocation of resources.

Disclosure: Nothing to disclose.

P106 | Time of day and chronotype effects on children's intellectual capacity

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Objectives/Introduction: IQ tests are extensively used in school settings to evaluate children's specific cognitive deficits that may contribute to low academic achievement. Some studies found that IQ assessments' results can vary according to testing time and chronotype. The present study aimed to probe potential chronotype X time of day (ToD) interactive effects on children's IQ results.

Methods: Sixty-eight 2nd, 3rd or 4th-graders (33 girls; 7–10 years old) were randomly assigned to one of four conditions resulting from crossing chronotype (morning- or evening-types, using the 20th and 80th percentiles from morningness/eveningness scale score of the Children ChronoType Questionnaire - CCTQ) and ToD (first or last hours of the school day - 9:00 am or 4:00 pm). All four groups were matched by age, gender, educational grade, and sleep problems reported by parents. Selected participants exhibited no known language disorders, learning difficulties, or behavioural disturbances. Cognition was assessed through WISC-III battery that provides three composite IQ scores (Verbal, Performance, and Full IQ) and four Index scores (Verbal Comprehension, Perceptual Organization, Freedom from Distractibility, and Processing Speed). Age-based standardized scores for all thirteen subtests were also analysed.

Results: No effects of chronotype X ToD were found in IQ, Index and subtests scores. Still, main effects of chronotype and ToD were uncovered. Children assessed in the morning revealed higher verbal IQ scores (p = 0.033, η_p^2 = .069) and a better performance on verbal subtests, Similarities (p = 0.045, η_p^2 = .061) and Information (p = 0.053, η_p^2 = .057). Morning-types showed higher scores in the Perceptual Organization Index (p = 0.033, η_p^2 = .069) and a better performance on the Arithmetic subtest (p = 0.031, η_p^2 = .071) than evening-types.

Conclusions: Results suggest that ToD influences children's performance on Verbal IQ's tasks, seeming better to assess these tasks in the morning. Concerning chronotype, morning-type children of our sample seem to have a better ability to interpret and organize visually-presented material. However, no differences between morning- and evening-type children were found in most WISC-III scores, including IQ scores. Taken together, our results suggest that

ToD of assessment sessions might influence IQ verbal scores in primary school children. Replication studies are needed.

P107 | Do specific types of sleep disturbances represent risk factors for poorer health related quality of life in inflammatory bowel disease? A longitudinal cohort study

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Objectives/Introduction: Poor global sleep quality is commonly reported in people with Inflammatory Bowel Disease (IBD), and is linked to poorer Health Related Quality of Life (HRQoL). However, understanding is currently limited by a lack of; (1) longitudinal research disentangling the effect of sleep on HRQoL; and (2) research investigating the impact of specific types of problems sleeping on IBD related outcomes, particularly on HRQoL.

Methods: N = 409 participants with IBD were recruited to a longitudinal study, completing measures at baseline (T1) and 4-weeks later at T2. Four specific sleep disturbances associated with IBD including sleep apnoea, insomnia, restless-legs, and nightmares were measured alongside depression, anxiety and stress, and HRQoL.

Results: After controlling for participant demographics, T1 depression, anxiety, stress, and T1 HRQoL, more severe symptom severity of sleep apnoea and insomnia symptoms at T1 significantly predicted poorer HRQoL at T2. However, the experience of restless-legs and nightmares at T1 did not predict HRQoL.

Conclusions: Symptoms synonymous with sleep apnoea and insomnia might represent modifiable environmental risk factors that provide independent contributions to HRQoL over time in those with IBD. These findings suggest that interventions designed to improve sleep apnoea and insomnia could confer benefits to HRQoL in those with IBD. However, more longitudinal research is needed to understand the contribution of sleep disturbances over the longer term, as well as more randomised controlled trials testing the effect of improving sleep on IBD related outcomes.

Disclosure: Nothing to disclose.

P108 | Sleep duration on the first night following a traumatic event and subsequent intrusive memories

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Objectives/Introduction: Sleep disruption is common in the weeks and months following a traumatic event and has been associated with the development of post-traumatic stress disorder (PTSD). Moreover, sleep focused treatment in individuals with PTSD, improves PTSD symptoms as well as sleep. Experimental findings suggest sleep immediately after an analogue traumatic event may impact initial stress reactions including frequency of intrusive memories in people and freezing behaviour in rodents. The aim of this study was to assess sleep in the first week immediately after a real-world traumatic event and the impact of concurrent and later psychopathology.

Methods: Patients (*n* = 87) admitted to the emergency department on the day of their traumatic event completed a one-week sleep and intrusive memories diary. Post-traumatic stress reactions, anxiety and depression were assessed at 1 week and 2 months.

Results: A mixture model showed a significant U-shaped relationship, where short and long sleep durations on the first night were associated with more intrusive memories in the subsequent week: 1 hr, 6.9 hr and 12.5 hr sleep durations associated with 20.74, 8.80 and 26.78 intrusive memories respectively. The same relationship was also found in the change in sleep duration as assessed by the Pittsburgh Sleep Quality Index completed for the month prior to the traumatic event. The frequency of intrusive memories in this first week was also found to be three times higher (*M* = 28.20 vs 9.96) in individuals who went on to meet Clinician-Administered PTSD Scale (CAPS) criteria at 2 months.

Conclusions: Monitoring intrusive memories and sleep in the first week post-trauma, using a simple diary, may help identify individuals more vulnerable to later psychopathology.