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0306

NORMATIVE DATA OF CYCLIC ALTERNATING PATTERN ACROSS THE LIFESPAN

Debora Migueis[1], Maria-Cecilia Lopes[2], Karen Spruyt[3], Glenda Lacerda[4]

University of Federal Fluminence [1] Children's Institute, University of São Paulo [2] Université de Paris [3] Unirio [4]

Introduction: Cyclic alternating pattern (CAP) is a marker of sleep instability, and neuroplasticity. Slow wave sleep has been described as a stable period, and CAP can be a marker of funcional delta sleep. The aim of this review was to evaluate the normative data of CAP parameters according to the aging process in healthy subjects.
Methods: Two authors independently searched databases using PRISMA guidelines through a systematic review and meta-analysis. Subgroup analysis and tests for heterogeneity were conducted. Descriptive statistics were used for the analysis of CAP variables. Meta-analyses were performed by using Comprehensive Meta- Analysis software. Data extracted from tables provide
Results: We found the evolution of CAP rate across the lifespan. Squares and diamond represent the CAP mean while bars represent the CAP range between 95% CI values according to each age range. We analysed 168 healthy individuals by CAP analyses. Scoring of CAP can begin at 3 months of life, when K-complexes, delta bursts, or spindles can be recognized. Rate of CAP increased with age, mainly during the first 2 years of life, then decreased in adolescence, and increased in the elderly. The A1 CAP subtype and CAP rate were high in school-aged children during slow-wave sleep (SWS). Our meta-analysis registered the lowest CAP rate in infants younger than 2 years old and the highest in the elderly.
Conclusion: The normative data of CAP in NREM sleep can be connected with brain maturation.The CAP rate increased with age and sleep depth, especially during SWS. These data in sleep disorders can be a treatment goal. CAP may reflect neurodiversity of endophenotype and human cronobiotypes. Further studies about CAP subtypes are needed.
Support (If Any):

0307

IS POOR SLEEP ASSOCIATED WITH USE OF MULTIPLE BENZODIAZEPINE RECEPTOR AGONISTS IN OLDER VETERANS?

Sara Ghadimi[1], Cathy Alessi[1], Monica Kelly[1], Jennifer Martin[1], Alison Moore[2], Austin Grinberg[3], Michelle Zeidler[1], Joseph Dzierzewski[4], Michael Mitchell[3], Andrew Guzman[1], Jessica Armendariz[3], Safwan Badr[5], Constance Fung[1]

UCLA/VA Greater LA [1] University of California, San Diego [2] VA Greater LA [3] Virginia Commonwealth University [4] Wayne State University/ John D. Dingell VA Medical Center [5]

Introduction: Benzodiazepine receptor agonists (BZAs) are often prescribed for insomnia in older adults. Polypharmacy increases risk of adverse events in this population in general, particularly when medications within the same class are prescribed. During an ongoing hypnotic deprescribing trial, we explored use of more than one BZA (multi-BZA use) and self-reported sleep quality among older adults.
Methods: Telephone surveys were performed for recruitment to an ongoing BZA deprescribing trial. Participants aged ≥ 55 years who were prescribed at least one BZA (i.e., alprazolam, clonazepam, lorazepam, temazepam, or zolpidem) from a Department of Veterans Affairs pharmacy in Southern California were asked about their use of each BZA over the past 3 months for sleep (yes/no). Multi-BZA use was defined as using > 1 different BZA over the past 3 months. Self-reported sleep items included duration of sleep problems (<3, 3-12, or >12 months), sleep quality (very or fairly good, fairly or very bad), and sleep efficiency (mean total sleep time over time in bed). Analyses compared sleep variables between multi-BZA and non-multi-BZA users (Fisher's Exact or t-tests).
Results: Among participants (N=359), 152 (42.3%) reported using zolpidem, 41 (11.4%) lorazepam, 39 (10.9%) alprazolam, 31 (8.6%) clonazepam, and 29 (8.1%) temazepam during the past 3 months. 35 (9.8%) participants reported taking more than one of these drugs. 93.9% reported their sleep problems were present for ≥3 months. 68.3% of participants reported their sleep was fairly/very bad, and mean sleep efficiency was 67.9 (SD 18.5). There were no significant differences between multi-BZA versus non-multi-BZA users in duration of sleep complaints (Fisher's Exact=1.0; p=.842), sleep quality (Fisher's Exact=0.70; p=0.56) or sleep efficiency (p=0.91).
Conclusion: We found 1 in 10 older adults prescribed a BZA for sleep reported multi-BZA use over the past 3 months. Multi-BZA use was unrelated to duration of sleep complaints, sleep quality or sleep efficiency. Whether the use was simultaneous or staggered, these findings are concerning, given the elimination half-life of most of the BZAs and that polypharmacy, especially within medication class, may increase risk of adverse events (e.g., falls). Further research is needed to explore factors contributing to multi-BZA use.
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0308

THE STABILITY OF SLOW WAVE SLEEP AND EEG MICROSTRUCTURE MEASURES ACROSS TWO CONSECUTIVE NIGHTS OF LABORATORY POLYSOMNOGRAPHY IN COGNITIVELY NORMAL OLDER ADULTS

Anna Mullins[1], Ankit Parekh[1], Korey Kam[1], Omonigho Bubu[2], Reagan Schoenholz[1], Shayna Patel[2], Zanetta Kovasyuk[2], Bresne Castillo[1], Zachary Roberts[1], David Rapoport[1], Indu Ayappa[1], Andrew Varga[1], Ricardi Osorio[3]

Icahn School of Medicine at Mount Sinai [1] NYU Grossman School of Medicine [2] NYU Grossman Medical School [3]

Introduction: Healthy and sleep disordered populations show high night-to-night variability of polysomnographic (PSG) macrostructure metrics, however there is evidence of stability in EEG microstructure. In-laboratory PSG is critical to gold standard measures of sleep physiology but multi-night investigations are resource heavy and burdensome to participants. Given the theoretical link between sleep and Alzheimer's disease (AD) pathology (tau and β-amyloid burden), we assessed the night-to-night reliability of sleep macrostructure and EEG microstructure in a group of cognitively normal elderly participating in aging and memory studies.
Methods: 107 participants (mean = 67±8 yrs., range [54-84 yrs.], 72% female) attended 2 consecutive nights PSG scored according to AASM guidelines for sleep staging, respiratory and leg movement events. Midline EEG (Fz, Cz and Pz referenced to average mastoid signals) were analyzed in 98 participants using an automatic algorithm (DETOKS) for detection of relative slow wave