Respiration

Une étude parue dans la revue Pneumologie s’interroge sur le sommeil des patients soumis à un traitement par opioïde pour douleur chronique. Est mise à l’épreuve l’hypothèse selon laquelle les hypersomnies observables sont dues notamment à la prévalence de troubles respiratoires du sommeil chez ces patients.

Pharmacologie

La revue Clinical Pharmacology and Therapeutics a testé la tolérance et les spécificités pharmacodynamiques de l’Almorexant, un antagoniste de l’orexine dans un contexte de lutte contre l’insomnie.

L’agomélatine, un nouvel antidépresseur aux propriétés pharmacologiques originales (agoniste mélatoninergique et antagoniste 5HT2c) est évaluée dans une étude parue dans la revue Human Psychopharmacology dans le cadre d’une stratégie thérapeutique de traitement de la désorganisation des cycles de sommeil et de veille chez des patients atteints de troubles dépressifs.

Sommeil de l’enfant et de l’adolescent

La revue Alcohol, Clinical and Experimental Research met en évidence les antécédents, à l’âge de l’adolescence, d’un sommeil de moindre qualité. Un enfant qui dormirait mal deviendrait un adolescent plus fragile en termes de sommeil et comportements et plus enclin à la prise de substances illicites ou à la surconsommation d’alcool.

Instruments de lecture

Si l’examen par polysomnographie demeure le dispositif le plus adapté pour l’étude du sommeil, le Journal of Sleep Research évalue à partir d’une revue de la littérature la pertinence d’autres modes de lecture « alternatifs ». Les auteurs concluent sur la légitimité de porter plus loin la connaissance et l’usage de ces méthodes non invasives et peu couteuses.

---


Long-Term Opioid Therapy and Respiratory Insufficiency During Sleep

Nolte JE, Dette F, Cassel W, Riese C, Augsten M, Koehler U.

Klinik für Innere Medizin, SP Pneumologie, Intensiv- und Schlafmedizin (Direktor: Prof. Dr. C. Vogelmeier), Philippus-Universität Marburg.

An increasing proportion of the patients with chronic pain are being treated with opioids on a long-term basis. There are indications that the causes of hypersomnia in patients under chronic opioid therapy are primarily related to breathing disorders during sleep. Hence, we compared the polysomnographies of three hypersomnic patients receiving long-term opioid therapy before and during nocturnal non-invasive ventilatory therapy. Significant findings were a central breathing pattern accompanied by reduced deep and REM sleep. On applying non-invasive ventilatory therapy, there was a significant improvement of respiratory status with an increase of deep sleep as well as a moderate decrease in hypersomnia. In patients under chronic opioid therapy with hypersomnia, the presence of central breathing disorders should be considered. © Georg Thieme Verlag KG Stuttgart · New York
Orexin Receptor Antagonism, a New Sleep-Promoting Paradigm: An Ascending Single-Dose Study With Almorexant


Department of Clinical Pharmacology, Actelion Pharmaceuticals Ltd, Allschwil, Switzerland.

Almorexant, a dual orexin receptor antagonist potentially representing a new class of sleep-promoting compounds, was administered in an ascending single-dose study to evaluate tolerability, pharmacokinetics, and pharmacodynamics. Seventy healthy male subjects were enrolled in this double-blind, placebo- and active-controlled study. Each dose level (1-1,000 mg) was investigated in a separate group of 10 subjects (6 on almorexant, 2 on placebo, 2 on zolpidem 10 mg). Almorexant was well tolerated with no signs of cataplexy. Peak plasma concentration (C(max)) was quickly attained (median time to maximum concentration (t(max)) ranged from 0.7 to 2.3 h), and plasma concentrations subsequently decreased quickly to ~20% of C(max) over the course of 8 h. Vigilance, alertness, and visuomotor and motor coordination were reduced following daytime administration of zolpidem or almorexant at doses of >/=400 mg. Population pharmacokinetic/pharmacodynamic modeling suggested that doses of ~500 mg almorexant and 10 mg zolpidem are equivalent with respect to subjectively assessed alertness.

---

Objective measurements of sleep for non-laboratory settings as alternatives to polysomnography - a systematic review.

VAN de Water AT, Holmes A, Hurley DA

Utrecht university, General Health Sciences, Physiotherapy Science, Utrecht, the Netherlands.

Summary Sleep disturbance influences human health. To examine sleep patterns, it is advisable to utilize valid subjective and objective measures. Laboratory-based polysomnography (PSG) is deemed the gold standard to measure sleep objectively, but is impractical for long-term and home utilization (e.g. resource-demanding, difficult to use). Hence, alternative devices have been developed. This study aimed to review the literature systematically, providing an overview of available objective sleep measures in non-laboratory settings as an alternative to PSG. To identify relevant articles, a specific search strategy was run in EMBASE, PubMed, CINAHL, PsycInfo and Compendex (Engineering Village 2). In addition, reference lists of retrieved articles were screened and experts within this research field were contacted. Two researchers, using specified in/exclusion criteria, screened identified citations independently in three stages: on title, abstract and full text. Data from included articles were extracted and inserted into summarizing tables outlining the results. Of the 2217 electronically identified citations, 35 studies met the inclusion criteria. Additional searches revealed eight papers. Psychometric characteristics of nine different objective measures of sleep pattern alternatives to PSG ([bed] actigraphy, observation, bed sensors, eyelid movement- and non-invasive arm sensors, a sleep switch and a remote device) were evaluated. Actigraphy is used widely and has been validated in several populations. Alternative devices to measure sleep patterns are becoming available, but most remain at prototype stage and are validated insufficiently. Future research should concentrate on the development and further validation of non-invasive, inexpensive and user-friendly sleep measures for non-laboratory settings.

PMID: 20374444 [PubMed - as supplied by publisher]
**Childhood Sleep Problems, Response Inhibition, and Alcohol and Drug Outcomes in Adolescence and Young Adulthood.**

Wong MM, Brower KJ, Nigg JT, Zucker RA.

From the Department of Psychology (MMW), Idaho State University, Pocatello, Idaho; Addiction Research Center (KJB, RAZ), Department of Psychiatry, University of Michigan, Ann Arbor, Michigan; Oregon Health and Science University (JTN), Portland, Oregon.

**Background:** To our knowledge, no prospective studies examine the relationships among childhood sleep problems, adolescent executive functioning, and substance outcomes (i.e., substance use and substance-related problems). In this study, we examined whether childhood sleep problems predicted adolescent sleep problems and response inhibition. We also tested whether adolescent sleep problems and poor response inhibition mediated the relationship between childhood sleep problems and substance (alcohol and drug) outcomes in young adulthood.

**Methods:** Study participants were 292 boys and 94 girls (M = 4.85, SD = 1.47) from a community sample of high-risk families and controls.

**Results:** When compared to their counterparts, those with trouble sleeping in childhood were twice as likely to have the same problem in adolescence. Childhood overtiredness predicted poor response inhibition in adolescence. Persistent trouble sleeping from childhood to adolescence and response inhibition in adolescence mediated the relationship between childhood sleep problems and drug outcomes in young adulthood, whereas overtiredness in childhood directly predicted alcohol use outcomes and alcohol-related problems in young adulthood.

**Conclusions:** This is the first study showing a long-term relationship between childhood sleep measures and subsequent alcohol and drug outcomes. The developmental and clinical implications of these findings were discussed. Prevention and intervention programs may want to consider the role of sleep problems and response inhibition on substance use and abuse.

PMID: 20374209 [PubMed - as supplied by publisher]
wake cycles in MDD. The improvement of both nighttime sleep and daytime functioning with agomelatine are promising features of this antidepressant regarding the management of MDD. Copyright (c) 2010 John Wiley & Sons, Ltd.

PMID: 20373473 [PubMed - in process]