

P1015**Effects of six-months methylphenidate treatment on sleep disturbances in children with attention-deficit/hyperactivity disorder. A pilot study**F. Liboni¹, L. Palagini², A. Manfredi¹, A. Tacchi¹, F. Ricci¹, M. Mauri² and G. Masi¹¹Scientific Institute Stella Maris for Child Neurology and Psychiatry, University of Pisa, ²Department of Clinical Experimental Medicine, Psychiatric Unit, University of Pisa, Pisa, Italy**Objective:** Sleep problems, particularly difficulty initiating and maintaining sleep, are frequently reported in children with Attention-Deficit/Hyperactivity Disorder (ADHD) comorbidity type with or without methylphenidate (MPH) treatment. The aim of the study is to evaluate sleep consistency in children with ADHD and to look for a correlation between sleep characteristics and ADHD symptom severity and general functioning.**Methods:** Ten ADHD patients, ages 6–10 years, were evaluated at T0 (drug naive) and at T1 (after six months of MPH treatment; two doses/die 0.5 mg/kg/die). Children sleep and habits questionnaire (CSHQ), Clinical Global Impression for Severity scale (CGI-S) and Improvement scale (CGI-I) and Children's Global Assessment Scale (CGAS) were administered.**Results:** At T0 6 out of 10 patients showed sleep disorder (CSHQ total score >41, mean value 44.3). Elevated score in CSHQ subdomain such as bad resistance and daytime sleepiness were found. CGI-S, CGI-I and CGAS score didn't correlate with sleep characteristics ($p=ns$).

At T1 a reduction of CSHQ mean total value (=42.3) has been registered. The normalization of sleep pattern didn't correlate with CGI-S, CGI-I and CGAS scoring.

Discussion: Clinically significant sleep problems are present in children with ADHD both drug naive and on MPH treatment. The nature of etiology of the sleep problems in ADHD and the contributions of psychotropic treatment strategies on their evolution have still to be better characterized.**Disclosure:** Nothing to disclose.**P1016****Valid methods for the estimation of children's sleep problems in clinical practice**H. Werner¹, P. Hunkeler², C. Benz², L. Molinari², R. Huber² and O. Jenni²¹University Children's Hospital Zurich, ²Child Development Center, University Children's Hospital Zurich, Zurich, Switzerland**Objectives:** Behavioral sleep problems are highly prevalent during childhood. A careful evaluation of sleep patterns is essential in clinical practice. Recently, we provided data about the interchangeable use of actigraphy, diary and questionnaire for the assessment of sleep patterns in healthy children (Werner, 2008). However, it remains unclear how well actigraphy and diary also agree in sleep-disordered, young children.**Methods:** A total of 42 sleep-disordered children (age range 6–47 months) who came for out-patient sleep consultations were included. Sleep patterns were assessed by actigraphy and diary. Sleep patterns were identically defined as in Werner et al. (2008). The degree of agreement between methods was quantified using the 95% limits of agreement of Bland and Altman (1986).**Results:** Parents reported bedtime struggles in 62% of the children, and night awakenings in 95%. Differences between methods were smallest for sleep start (± 25 min), sleep end (± 26 min), andassumed sleep (± 35 min). For actual sleep time, day-time sleep duration and 24-h sleep duration, differences were ± 97 min, ± 49 min, and ± 60 min, respectively.**Conclusions:** On the basis of our clinical experience, we defined the agreement between methods as acceptable if differences were smaller than 30 min. This condition was satisfied for sleep start, sleep end, and assumed sleep, while for actual sleep duration and day-time sleep, it was not. Our findings suggest that at least for sleep start, sleep end and assumed sleep, the diary is a satisfactory method for the assessment of sleep patterns in sleep-disordered, young children.**Disclosure:** Nothing to disclose.**P1017****Evaluation for apparent life-threatening events (ALTE) in infants - using polysomnography with simultaneous pH monitoring**K.-Y. Chae¹, S.-K. Rhie¹, Y.-W. Bang² and I.-K. Sohn²¹Pediatric Neurology & Sleep, CHA University, Seongnam, ²Keyo Hospital, Uiwang, Republic of Korea**Objectives:** An apparent life-threatening event (ALTE) is an acute, unexpected change in an infant's breathing, appearance, or behavior that is frightening to parent or caretaker with various cause. To assess the cause of ALTE, we evaluated the patient by polysomnography with simultaneous pH monitor.**Methods:** Infants who visit Bundang CHA Medical Center with experiencing ALTE without definite cause were tested. Detailed history, physical examination, pH monitor, polysomnography, EEG, brain study and echocardiography were done, case by case. Feeding incoordination was defined as skipped respiration during feeding, feeding hypopnea was as decreased amplitude of nasal flow during feeding and GER was as positive history of regurgitation or less than pH 4 during pH monitor after feeding.**Results:** Among 13 infants, nine (80%) have REM periodic breathing less than 90% saturation, seven (58%) have GER during and after feeding, five (46%) have feeding incoordination, and five (46%) have hypopnea with feeding. Only one infant has cardiac problem which didn't provoke cyanosis. One infant has interictal activity in EEG without clinical seizure activity. Central apnea which meets the criteria of premature apnea was not noted.**Conclusions:** Polysomnography with simultaneous pH monitoring was very useful for evaluating the unknown cyanosis in infants, especially in infants with feeding problems. Besides of relatively well-known etiologies of ALTE such as apnea, seizure and GER, feeding incoordination and hypoxia or REM periodic breathing can be a trigger or major factor of ALTE in neonate.**Disclosure:** Nothing to disclose.**P1018****Child and carer sleep quality in paediatric hospital wards**R. S. Bevan^{1,2}, R. Sankey³, E. Clayton³, H. Grice³ and C. M. Hill^{1,2}¹Southampton Children's Hospital, ²Clinical Experimental Sciences Division, ³Faculty of Medicine, University of Southampton, Southampton, United Kingdom**Objectives:** To compare sleep of children in hospital and their resident parents/carers, with sleep at home after hospital discharge and investigate sound levels across the two sleep environments.**Methods:** Sleep duration and quality was measured using Acti-watches (AMI, New York), specifically total sleep time (TST) and sleep efficiency (SE). Sound levels were measured using a sound