



<b>Title</b>	<b>Cognitive deficits in sleep apnea: A meta-analysis</b>
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tests consists of well-known words, where as the figural tests are new, abstract forms and difficult to learn. We found a third significant interaction effect between the type of information and the mode of presentation. In support with the hypothesis of global vs. local cerebral functioning, we found that in tasks with serially presented information patients with right temporal lobe dysfunction score better, and if the information is presented simultaneously those with left temporal lobe dysfunction perform better.

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**A.C. ALMEIDA, M.D. SILVA, P.S.A. HENRIQUES-FILHO, & C.D. FERREIRA. Early Epileptic Encephalopathy With EEG Burst-Suppression Pattern (EEBS): A Case Report.**

*Introduction:* EEBS were described in the late 1970s and only a dozen cases were reported in literature until today. *Case Description:* We report on a female 19 months old, healthy until 5 months of age. Then she started seizures and loss of neurological landmarks. Seizures were tonic, 4 to 5 a day. At admission she had no cervical tonus, no speech or environment interaction, neither was able to hold objects or follow light and sound. Pyramidal signs and an early puberty were found. She was taking carbamazepin and valproic acid. MRI revealed only slight diffuse brain atrophy. EEG disclosed burst-suppression. Serum hormones FSH, LH, and TSH were increased. No other abnormality could be found in a complete serum screening for inborn metabolism errors, electrolyte, or metabolic disturbances. Evoked potentials were normal. *Discussion:* Two conditions compose EEBS: Early infantile epileptic encephalopathy (EIEE), in which tonic seizures and radiological abnormalities constitute the majority of the described cases and, early myoclonic epileptic encephalopathy (EMEE) with myoclonic seizures and metabolic abnormalities. Early puberty is not diagnostic criteria for any of these conditions, but has been described in literature associated with valproic acid use as in our case. *Conclusion:* According to literature descriptions, our case meets diagnostic criteria for EIEE.

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**J.T.H. YIP, T.M.C. LEE, D.L.K. DAI, & J.C.C. LIU. Cognitive Deficits in Sleep Apnea: A Meta-Analysis.**

A meta-analytic review has been conducted on cognitive deficits in sleep apnea. Although there have been various research conducted on the effect of sleep apnea on cognitive function, there have been some inconsistencies in these previous research findings. The main purpose of this study is to examine the degree of cognitive deficits in sleep apnea patients, as well as the potential moderator variables of such deficits. Furthermore, the relative contribution of both physiological and neuropsychological measures in correctly classifying sleep apneas of different severity, relative to normal controls were also examined in order to discourage the use of measures that have relatively poor predictive validity. Both vote-counting methods and fixed-effects models were examined based on the effect sizes calculated for each individual study. Degree of sleep apnea (moderate or severe), levels attention, short- and long-term memory performance, and vigilance served as the primary dependent variables of interest in this study. Characteristics of each study and patient population were noted to examine the effects of these variables on the dependent measures. The results in this study support the notion that multiple measures should be used in assessing cognitive deficits in sleep apnea patients, as well as the hypothesis that there is a discontinuity of cognitive deficits between sleep apnea patients of varying severity. Furthermore, there seems to be a differential contribution of both physiological and neuropsychological measures in correctly categorizing sleep apnea patients.

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**Paper Session 9/9:00–10:30 a.m.**

**CHILD NEUROPSYCHOLOGY**

**K. FERNANDO, L. EATON, & M. FAULKNER. Development and Piloting of the Starship Post-Traumatic Amnesia Scale in Children Aged 4–6 Years.**

The aim of this study was to develop and pilot a New Zealand PTA Scale for children aged between 4 and 6 years. The scale consists of 7 orientation questions and 5 memory items modelled on the Westmead PTA Scale. The sample consisted of 45 four-year-olds, 82 five-year-olds, and 49 six-year-old children from a variety of cultural and socioeconomic backgrounds. Children were recruited from hospitals, kindergartens, and schools. Results were analyzed across age groups using means and standard deviations. The orientation and memory items were analyzed separately as well as in combination. Early analyses indicate that the majority of normal children in the 4-to-6-year age group can answer most of the orientation questions correctly and remember the memory stimuli from day to day. The results indicate that the Starship PTA Scale is suitable for young children aged 4 to 6 years. It is simple and quick to administer and utilizes an operational definition of posttraumatic amnesia in terms of measuring continuous memory.

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**K. THICKPENNY & K. FERNANDO. The Starship Post-Traumatic Amnesia Scale: Does It Predict Outcome After TBI in Children Aged 3–7 Years?**

The Starship Post-Traumatic Amnesia Scale was developed for use with New Zealand children aged 3–7 years. The purpose of the present study was to assess whether the duration of posttraumatic amnesia (PTA), as measured by the Starship PTA Scale, was significantly related to neuropsychological functioning in 19 children following TBI and could therefore be used as a measure of TBI severity. An additional aim was to assess whether the Glasgow Coma Scale (GCS) was significantly related to neuropsychological functioning. NEPSY subtests were used to assess the neuropsychological domains of Attention and Executive Functions, Visuospatial processing, and Memory and Learning, 2 months post TBI. Multiple regression techniques were used to analyze the results. The GCS scores and duration of PTA were not significantly related. The findings indicated that performance on the NEPSY Memory and Learning domains was significantly predicted by duration of PTA, and in all cases the longer the duration of PTA, the poorer the memory scores were. The duration of PTA, however did not contribute to the prediction of performance on the Visuospatial Processing, and the Attention and Executive Function domains. The GCS did not significantly predict performance on any of the NEPSY domains 2 months post TBI. The Starship PTA Scale was found in this study to be a more sensitive measure of cognitive outcome than the GCS. Correspondence: *Kris Fernando, Child and Family Unit, Starship Hospital, Private Bag 92024, Auckland, New Zealand.*

**M. SADEH, A. BERGER, G. ZUR, A. SHUPER, L. KORENRICH, & D. INBAR. The Cerebellum's Role in Executive Functions.**

Children with posterior fossa tumors (PFT) were compared to controls in order to clarify cerebellum functions. They were assessed as part of a larger study conducted on pediatric neuro-oncology patients at the Schneider Children's Medical Center of Israel. These children underwent surgery alone to remove their tumor. Seven children with PFT (average age at surgery 4.9 years, age range 1.0–10.8 years; average age at testing 12.1 years, age range 9.3–18.2 years; average group intelligence: VIQ = 108; PIQ = 115) were compared with 14 normal controls on a set of executive cognitive tasks, i.e., planning, set shifting, verbal fluency, working memory and visual organization. Each child from the PFT group was compared to 2 children matched for age, level of education, intelligence and sex. The tests administered were: Tower of Hanoi (PFT group: average time = 68 s M no. of steps = 11; Cont.: time = 34 s, steps = 11), Naming from the