#### Posters

80% and CT in 47%. Seizures were controlled in 36%, acceptable in 51% and uncontrolled in 15%.

**Conclusions:** An active database for paediatric epilepsy can provide valuable demographic, clinical and audit data. This improves quality of care and provides opportunities for outcome comparators, targeted audit and future research.

### 666

# INTELLECTUAL CAPABILITIES AT CHILDREN WITH EPILEPSY

### O. Jotovska

# Institute for Mental Health of Children and Youth, Skopje, FYR Macedonia

**Background and aims:** To evaluate intellectual potential at children with epilepsy, considering if the intellectual functioning of these children is worsening; the development of the ilness and the basic factors which influence development and intelligence deficit.

**Methods:** Files of 52 children, pacients in our institute, were reviewed with information about their sex, age, pediatric and neurologic status, neuropsychological evaluation of intellectual fonctioning, EEG results and NMR of the brain, and the therapy that was used and the effect it caused.

**Results:** 25 girls and 27 boys, at the age of 1 to 18 years. The following results were found: normal intellectual development at 27 children, borderline intellectual fonctioning at 6 children, mild mental retardation at 15 children, moderate intellectual retardation at 4 children and neurological problems at 8 children; 39 children are on monotherapy, 13 children on polytherapy. The most used antiepileptics are valproats and carbamazepine, but the new generation of antiepileptics are frequently used too. The farmacoresistant epilepsy is verified in 11 children, and morphological changes of NMR of the brain are visualised at 16 children.

**Conclusions:** Most of the children with epilepsy show normal intellectual development, with tendency to decrease with the duration of the illness. Intellectual disability is more often found at children with an early beginning of the attacks, initially lower intellectual potential and lower control of attacks. Children with normal NMR of the brain most often have a normal intelligence. Higher intellectual deficit is found at children with farmacoresistant epilepsy.

667

# HELICOBACTER PYLORI INFECTION AND HEADACHE IN CHILDREN AND ADOLESCENTS

S. Karkelis, O. Papadaki-Papandreou,

M. Lykogeorgou, T. Papandreou, L. Lianou, I. Panayotou, E. Roma, G. Chrousos

# A' Department of Pediatrics, 'Agia Sofia' Children's Hospital, University of Athens, Athens, Greece

**Object of study:** Headache and migraine is a common problem nowadays for an increasing number of children and adolescents. At the last few years, there are some references in the literature about the correlation in adults between headache and Helicobacter Pylori infection. The aim of the study was the investigation of the correlation between headache and Helicobacter Pylori infection in children.

**Method:** A total number of 65 children and adolescents aged 7,5 to 17 years were enrolled. All of them suffered from headache or migraine (international criteria 2001) and they were tested firstly using urea breath test(UBT). From the children and adolescents tested with UBT, 17 of them were found positive for Helicobacter Pylori infection. These 17 children and adolescents were investigated with an upper GI endoscopy and received the proper therapy based on Helicobacter Pylori infected tissue culture and antibiogram.

**Results:** After 4 months of observation, starting 1 month after the end of the anti-helicobacter infection therapy, all 17 children and adolescents were free of headache and migraine symptoms.

**Conclusion:** Although these are preliminary findings, we can assume that Helicobacter Pylori infection maybe plays a role in the pathogenesis and phenotype expression of headache and migraine in children and adolescents.

### 668

# CHANGES OF SERUM FERRITIN AND BLOOD LEAD LEVELS IN CHILDREN WITH ATTENTION DIFICIT HYPERACTIVITY DISORDER

### H.M. Yang, J. Cui

### Paediatric Department, Sichuan University, Chengdu, China

**Objective:** To explore the changes of serum ferritin(SF), blood lead(BP) and hemoglobin in children with attention deficit hyperactivity disorder (ADHD).

**Methods:** 53 ADHD children were divided into three subgroups, including 18 ADHD-Combined type(ADHD-C), 20 ADHD-Predominantly inattention type(ADHD-I) and 15 ADHD-Predominantly hyperactive-impulsive type (ADHD-HI), and 18 normal controls were recruited. Blood was taken to measure the serum levels of SF,BP and hemoglobin.

#### **Results:**

1.The levels of serum ferritin in ADHD subtype groups were lower than those in control group ( P< 0.05), and the levels of serum ferritin in ADHD-I were obviously lower than those in ADHD-C and ADHD-HI.

2. There were no significant differences in the levels of blood lead among the three subtypes of ADHD and control group (p>0.05)

3. There were no significant differences in the levels of hemoglobin among the three subtypes of ADHD and control group (p>0.05).

**Conclusion:** The serum ferritin Levels of ADHD children are lower than those of normal children, especially in the subgroup of ADHD-I.

#### 669

# SLEEP DISORDERS IN DEVELOPMENTALLY DISABLED CHILDREN - LITERATURE REVIEW

O. Ahmareen, E. Neary, F. Sharif

### Department for Paediatrics, Midland Regional Hospital, Mullingar, Ireland

**Aim:** To find evidence for an association between sleep disorders and neurobehavioral and neurocognitive conditions of children.

**Methods:** Extensive review of a broad range of psychiatric and neurodevelopment disorders taken by way of literature review to include original research articles, review articles, case series, special articles, reviews and short commentaries.

**Results/Conclusions:** Debilitating childhood developmental disorders are common. Associated demanding mannerisms are common, including sleep problems. This in turn is then linked to daytime performance issues, reduced developmental and academic growth, and considerable familial psychopathology. Social and behavioural measures have, to a degree, reformed management; nevertheless, a lot of children continue to have sleep-

related disorders. For that reason contemporary medications have an important complementary role in addition to psychosomatic, educational and social strategies. This literature review looks into the substantiation of the occurrence and severity of sleep problems in children with severe neurodevelopmental disorders. We also looked into the probable advantages of using medication, mainly focussing on the significance of melatonin as a sleep inducer.

Thebroadrangeofpsychiatricandneurodevelopment disorders taken in this extensive literature review include original research articles, review articles, case series, special articles, reviews and short commentaries. These articles provide evidence for an association between sleep disorders and neurobehavioral and neurocognitive conditions of children.

670

# MALE VS FEMALE: STRUCTURAL SUSCEPTIBILITY TO NEUROINFLAMMATION.

#### A.M.H. Young<sup>1</sup>, S.J. Powis<sup>2</sup>

<sup>1</sup>School of Clinical Medicine, University of Cambridge, Cambridge, <sup>2</sup>Bute Medical School, University of St Andrews, St Andrews, UK

**Introduction:** A causation model for Autistic Spectrum Disorder (ASD) has not yet been firmly established. Characterised by a triad of impairments in social skills, verbal communication and behaviour, the condition has been heavily linked to the male sex with some studies suggesting that the ratio is as high as 4:1. Here we analyse the structure of unaffected male and female brains demonstrating how their differences could be key to understanding the pathological mechanism underpinning the disorder.

**Methods:** Using ICD-10 and DSM-IV classifications we review the diagnostic characteristics which compound the condition and confirm the functional centres where these problems arise.

**Results:** We have been able to review the current understanding of brain mapping and demonstrate that the female brain has a more robust network in the functional areas associated with autism and can therefore provide some resistance to the neuroinflammatory component of the condition.

**Conclusions:** This series of data has demonstrated that the male brain may be more susceptible to