Long Term Neurodevelopmental Outcome of the Affect of ApoE Gene Polymorphism on Social Communication Questionnaire Factor Structure

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Background and aims
To determine the neurodevelopmental morbidity of preterm infants with periventricular intraventricular haemorrhage, at the age of 4.

Methods
The patients at the age of 4 were evaluated through neurologic examination and motor assessment by a pediatric neurologist and Denver II Developmental Screening Test by a psychologist. The results were compared with Denver II Developmental Screening Test results which had been made at 3–6 and 6–12 months.

Results
The total study population consisted of 66 prematurely born children of less than 37 gestational age. When the cases with PVH-IHV were graded with the cranial neuroimaging findings, 62.1% were documented as grade I haemorrhage, 18% as grade II, 6% as grade III and 13.9% as grade IV. Patients with grade III–IV Periventricular Intraventricular Haemorrhage had significantly lower Denver II Developmental Screening Test results at the age of 4, compared with grade I-II Periventricular-Intraventricular Haemorrhage group. Similarly, ≤32 weeks patients had significantly lower Denver II Developmental Screening Test results which been made at 3–6 months compared with ≥32 weeks patients.

Conclusions
Children who were born ≤32 gestational weeks and/or patients with grade III-IV periventricular-intraventricular Haemorrhage have an increased risk of neurologic impairment. All premature infants should be evaluated by Denver II Developmental Screening Test in early childhood period of life.

Poster abstracts

The Affect of ApoE Gene Polymorphism on Neuro-Cognitive Functions in Children with Congenital Heart Disease

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Research conducted on children with CHD displays that these children’s neurological development is different than the normal population and focuses on the reasons of this difference. Currently, the factor that attains the highest emphasis is the Apo E genotype of the patients. We aimed at revealing the influence of Apo E gene on the neurological development process of children with CHD. Our goal is, predicting the nurological development of children with CHD according to Apo E gene expression, and anchoring the children requiring support, at an earlier stage. We investigated 188 children patients with CHD, in GUTF paediatric cardiology department, between 2009–2013. We documented the socio-demographic parameters. After physical examinations followed by psychometric tests, we examined Apo E genotype on blood samples of the children. Cyanotic patients’ motor functions were worse than acyanotic patients (p < 0.05). Patients with VSD got higher points from the WISC total IQ, compared to the patients who do not have SD. The other psychometric tests on the children did not display any further difference. 78.7% of the patients who were involved in our research classify as E3/E3. Sociocultural and economic status of parents was positively associated with psychometric test results (p < 0.05).

Relevant literature claim that children with CHD display worse neurocognitive functioning compared to normal population, and having Apo E2 allele is a risk factor for it. Apo E4 allele is more related to better psychometric test.

Results
However, our results display no influence of ApoE gene on the neurocognitive functioning.
Conclusions A substantial number of communication items did not correlate well with the total score. These items should be revised for screening in a general population setting. Discriminative ability of the SCQ total score performed well for differentiating children with ASDs from other developmental disorders.

**PO-0810 PARENTAL SOCIO-ECONOMIC CHARACTERISTICS AND SOCIAL COMMUNICATION QUESTIONNAIRE SCORES FOR PRIMARY SCHOOL CHILDREN SCREENED AS PART OF AN AUTISM PREVALENCE STUDY**

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Background and aims To describe SCQ scores based on parental socio-economic characteristics for primary school children 6–11 years, 7951 screened as part of an autism prevalence study in three urban regions of the Republic of Ireland (Galway, Waterford, Cork).

Methods A study booklet was completed by parents of eligible children included: demographics, developmental history, and a screening instrument, Social Communication Questionnaire – Lifetime Form (SCQ: Rutter et al., 2003).

Results The majority of study booklets were completed by mothers 4,474 (86%). Overall the highest mean total SCQ scores were for mothers of children educated to primary or secondary level education 42%, 2195; 5.54 ± 4.98 working in skilled and semi skilled manual occupations 25%, 807; 5.44 ± 4.63 or described their ethnic cultural background as Irish traveller other white background 301, 6%; 6.72 ± 50.2. There were no significant differences in mean SCQ scores where mothers expressed concerns at any stage of their child’s development with and without diagnosed developmental disorders in relation to mothers educated to primary or secondary level education, working in skilled and semi skilled manual occupations, or those who described their ethnic cultural background as Irish traveller other white background.

Conclusions Mother’s first language and level of education may have been contributing factors relating to a proportion of observed high scores. However a number of the mothers of these children who expressed developmental concerns at any stage of the child’s development required further screening and/or referral for ADOS/ADI-R assessment.

**PO-0811 CAT-SCRATCH DISEASE: STILL A CHALLENGE**

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Introduction Cat-scratch disease (CSD)-neuroretinitis (CSDN) is an unusual pathology in immunocompetent individuals (1–2% of CSD). It typically presents with sudden vision loss following a febrile illness.

Case report A 10 year-old healthy girl presented with fever, headache, vomits and abdominal pain for 48 h. Also, she referred myodesopsias on her right eye. She had daily contact with kittens. Physical examination showed bilateral cervical nodes. At presentation, her ophthalmologic examination revealed a right eye disc swelling with normal visual acuity. One-week later, unilateral sudden diminished visual acuity (RE=2/10) with macular serous detachment was detected.

Blood analysis revealed normal white cell count, increased C-reactive protein (138 mg/L) and erythrocyte sedimentation rate (44 mm/h). A lumbar puncture showed pleocytosis (56/ul). Cranial and orbit MRI were normal. Blood and LCR cultures were negative. HIV, herpesviruses, Toxoplasma gondii, Mycoplasma pneumoniae, Borrelia burgdorferi, Mycobacterium tuberculosis, syphilis and autoimmune diseases were excluded.

Serologic test (IFA) for Bartonella spp, in blood and CSF, was positive (antibodies titers: IgM 32; IgG 4096) with negative DNA amplification. She was treated with doxycycline and rifampicin. Moreover, intravenous corticosteroids were added in the first 3 days. She became, asymptomatic and right visual acuity was 10/10 after 3 months.

Discussion The absence of a macular star does not exclude and should not delay the diagnosis of CSDN. Serology remains the most common test to support the diagnosis. The role of antibiotics with or without steroids is not consensual. Still, patients usually have a favourable visual outcome.

**PO-0812 NEURODEVELOPMENTAL OUTCOMES OF PREMATURE INFANTS WITH SEVERE INTRAVENTRICULAR HEMORRHAGE**

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Background and aims To describe neurodevelopmental outcomes of premature infants with severe intraventricular hemorrhage (IVH). We aimed to investigate the rates of cerebral palsy (CP) and neurodevelopmental impairment (NDI) among preterm infants who were ≥37 weeks gestation and had Grade 3–4 IVH.

Methods This was a retrospective cohort study of all preterm infants who were ≥37 weeks’ gestation, had Grade 3–4 IVH. A comprehensive assessment including hearing, vision, neurological and developmental evaluation with Bayley Scales of Infant Development, Second edition (BSID II) was performed by the experienced researchers at 18 to 24 months’ CA.

Results A total of 138 were diagnosed as severe IVH (Grade 3–4). Median Apgar score (p < 0.01) and resuscitation at birth (p < 0.01) were significantly different for group 1, group 2 and group 3. The use of catheterization, need for mechanical ventilation, need for phototherapy, retinopathy of prematurity and bronchopulmonary dysplasia were significantly higher in group 1 compared to group 2 and 3 (p < 0.001, p < 0.001, p < 0.01, p < 0.01 and p = 0.014 respectively). The duration of hospitalisation and mortality rates consistent with the degree of prematurity and were significantly higher in-group 1 compared to group 2 and 3 (p = 0.03 and p = 0.01). Among the long-term outcomes; the rates of CP and NDI did not differ between the groups (p = 0.68 and p = 0.068).

Conclusion Our results demonstrated that long-term outcomes of preterm infants did not differ between the groups classified according to the birth weight at 2 years of age. This has led to the conclusion that severe IVH is alone represents a