

characteristics as well as the neuropsychological outcome (after 1 and 2y) and its early predictors.

*Patients and method:* We evaluated 31 patients (17 males, 14 females) with infantile spasms. Mean age of seizure onset was 6.3 months. Inclusion criteria were: newly diagnosed patients with infantile spasms from 2 to 18 months, abnormal electroencephalography (EEG), and written informed consent of parents/caregivers. We collected birth, family, and seizure detailed history. All patients were examined neurologically and investigated with prolonged sleep and awake videos. EEG, brain magnetic resonance imaging, and developmental screening tests (ASQ) were carried out at admission.

*Results:* In 19 cases neurological examination was normal. In seven cases normal development was revealed. In the remaining 12 cases, developmental delay was detected and in the remaining 12 individuals, severe delay was identified. One year follow-up assessments were provided in 22 (74%) cases. One patient died. Neuropsychological development was not changed in 12 (55%) individuals. In three cases some improvement was detected and in the remaining six cases deterioration of development was identified. In all six cases of developmental deterioration seizures were started before the infant was 7 months old, this association was statistically significant (Pearson  $\chi^2$  6.3; df 1;  $p=0.019$ ).

*Conclusion:* The number of patients in our study is not high, however preliminary findings are consistent to the authors other studies. This study is still in process.

### Oral presentation 32

#### Early risk indicators of neurodevelopmental outcome in asphyxiated newborns treated with hypothermia

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*Introduction:* Data about early predictors of neurodevelopmental outcome in asphyxiated newborns treated with hypothermia are lacking. The aim of this study was to evaluate the predictive value of clinical and instrumental examinations performed during the first days of life in newborns after hypothermic treatment.

*Patients and method:* We enrolled 23 term-born newborns treated with hypothermia for perinatal asphyxia. Each patient performed a neurological assessment using the Hammersmith Neonatal Neurologic Examination (HNNE), an electroencephalogram (EEG), and brain magnetic resonance imaging (MRI), within 7 days of birth. The neurodevelopmental outcome was assessed at 12 months using the Hammersmith Infant Neurologic Examination (HINE), EEG and the Griffiths scales (DQ).

*Results:* In the early assessments, the HNNE was normal in 20 patients (87%), the EEG and MRI were normal in 12 patients (52%). At 12 months, the HINE and EEG were normal in 19 patients (83%). All the infants reported a global DQ within

the normal range, but 4 patients (17%) showed low scores in the locomotor scale.

*Conclusion:* The HNNE and MRI were found to be independent predictors of neuromotor outcome.

### Oral presentation 33

#### Determinants of effective parent-delivered therapy interventions in children with cerebral palsy: a qualitative synthesis

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*Introduction:* Parent-delivered therapy interventions for children with cerebral palsy (CP) can provide a sufficient therapy dose, improve parental mental wellbeing, and facilitate parent-child relationships, creating a more relaxed familial environment. However, parent-delivered interventions may also lead to increased parental stress and time constraints. The aim of this review was to gain a deeper understanding of the barriers and facilitators of parent-delivered therapy interventions, leading to the production of a checklist to support professionals in guiding parents to implement an effective intervention.

*Patients and method:* Searches were conducted in the following databases: Medline, PubMed, Scopus, Embase, CINAHL, and Cochrane. Studies had to meet the following inclusion criteria: descriptions of parent/health care professional/child experiences of parent-delivered therapy interventions for children and young people age 0–18 years, published in the English language between 1989–May 2017, with qualitative or mixed methods research design. The articles were critically appraised and then synthesized using a meta-ethnographic approach.

*Results:* A literature search identified 13 articles which met the inclusion criteria. Three main themes were identified: (1) building trusting relationships, (2) enabling the parents to cope, and (3) for both participants to see the intervention as a priority. Further synthesis developed three concepts identifying the important aspects of the interventions: empowerment, motivation and relationships.

*Conclusion:* By identifying both the facilitators and barriers of parent-delivered therapy through research, a checklist has been created for application into the home environment by health care professionals. The checklist encompasses the three overlapping constructs, empowerment, motivation, and relationships.