Clinical or electrical seizures were not present during the first 72 h nor the staphy of HIE increased during this period in any of the patients. Mean CSF NSE at 72 h was 26 ng/mL (+/-7.8).

Conclusions Clinical status of infants with mild HIE at 6 h of age does not worsen in the following 72 h. The aEEG traces are consistently normal and subclinical seizures are uncommon.

Background and aims Both clinical staging and aEEG during the first 6 h correlate with outcome in neonates with HIE and are used for inclusion of patients in therapeutic hypothermia (TH) trials and clinical protocols. However, little is known about the correlation between clinical evaluation and aEEG tracing these infants.

Objective To determine the correlation between clinical evaluation and aEEG during the first 6 h of life in HIE infants.

Methods Prospective observational study of HIE infants admitted in a tertiary unit during 2009 to 2011. A single clinician performed clinical exam before cooling indication. Staging of encephalopathy was done according to a validated scoring system. aEEG recording was performed from admission. Pattern classification was ranked from 1 to 5 (with higher scores indicating more suppressed traces).

Results 55 patients were included; 21.9% had mild, 27.3% moderate and 50.9% severe encephalopathy. The mean duration of a EEG recording was 71.52 ± 34.6 h and aEEG started at a mean age of 4.3 ± 3.1 h. We found a correlation between aEEG and the following items: ability to awaken (AA) (r = 0.72), spontaneous movements (r = 0.73) and posture (r = 0.74). No correlation was observed between aEEG and myotatic reflexes (r = 0.44) and breathing pattern (r = 0.37). A correlated with HIE stage (r = 0.85). Further, HIE stage correlated with the score of aEEG tracing at admission (r = 0.77).

Conclusion aEEG tracing correlates well with the degree of altered alertness and with the clinical grading of HIE, supporting the validity of this tool to reflect the severity of brain dysfunction before cooling in infants with HIE.

Background and aims aEEG predicts outcome in newborns with HIE. CSF-NSE serves as surrogate for HI brain injury. Little is known about the correlation between early aEEG and CSF-NSE within the first 72 h of age.