monitoring and hypothermia therapy in asphyxiated neonates, most level 2 units do not currently offer CFM, and a significant minority of tertiary level UK neonatal units do not currently offer brain monitoring or hypothermia therapy.

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CORRELATION BETWEEN AMPLITUDE-INTEGRATED EEG (AEEG) AND GENERAL MOVEMENTS (GMS) IN PRETERM INFANTS

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Since today the correlation between background cerebral electrical activity at aEEG and brain injury in preterm is unknown. The aim of the present study is to correlate the background activity at aEEG to the patterns of General Movements at writhing age and to evaluate if aEEG is predictive for cerebral palsy.

Methods: 17 preterms between 27 and 31 weeks of gestational age with normal head ultrasound were included. The aEEG were recorded during the first 24 hours of life for 60 minutes. The averaged signals were analysed off-line. Background activity was classified into three patterns categories: discontinuous low-voltage pattern (minimal amplitude < 3µV), discontinuous high voltage pattern (minimal amplitude between 3 and 5 µV) and continuous pattern. General movements were performed during the first 24 hours of life and weekly during writhing age.

Results: A background low-voltage pattern correlates positively with Cramped Synchronized General Movements (R: 0.74, p = 0.004), on the other way a high voltage pattern and a continuous pattern correlates with normal General Movements (R: 0.67, p=0.006).

Conclusions: A discontinuous low voltage pattern at aEEG in preterm could be expression of cerebral injury and/or altered maturation. In fact this aEEG pattern highly correlates with pathological Cramped Synchronized General Movements leading to the hypothesis of a similar strong correlation between discontinuous low voltage pattern and cerebral palsy in this range of gestational age.

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NEUROSONOGRAPHY AND HEMOSTASIS DATA IN PREMATURE NEWBORNS WITH HYPOXIC-ISCHEMIC ENCEPHALOPATHY

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Aim: Hypoxic - ischemic damages of the brain in preterm newborns is the significant current problem of neonatology.

Materials and methods: 140 newborns of 28-36 weeks gestation with 820-2650 gr. have been investigated. The 1st group included children with intra - and - periventricular I, II, III degree bleedings. The 2nd group included patients with I, II, III degree hypoxic - ischemic damages of CNS. The 3rd group included so called *healthy* children without clinical and ultrasound signs of brain damage. Para-clinical methods included haemostasis condition on 1st, 3rd, 5th, 7th days of life. Being correlated to disturbances of hemo-ligurodynamic data and ventriculometry.

Results: On the 3rd day of life 5,1% decrease of fibrinogen count in blood serum have been noted. Increase of thrombocytes (10.4%) and simultaneous decrease of APTT (7.3%) in 1st group children in comparison to control group have been revealed. In the 2nd group the spread and duration of cerebral ischemia were accompanied with fibrinogen increase (7.1%), thrombocytes (9.2 %) and APTT - 13.7% in comparison to control group have been noted.

Conclusion: Complex study of haemostasis system and neurosonography data were associated with different clinical manifestations. Peri - and - intraventricular bleedings were accompanied with thrombocytes count decrease and plasma - coagulation increase. Hypoxic - ischemic brain damages were accompanied with thrombocytes count increase and plasma-coagulation haemostasis decrease. So the combination of neurosonography and haemostasis investigation on 1st - 7th days of life are effective and significant in diagnostics of cerebral pathology in preterm newborns.