HIE grade	cTnI concentration, µg/L	Duration of inotropic support, hours
1 (n=7)	0.05 (0.02 - 0.09)	0 (0 - 24)
2 (n=20)	0.12 (0.08- 0.20)	24 (12 - 48)
3 (n=15)	0.67 (0.41-2.06)	48 (40 - 76)

[Troponin I and severity of HIE]

Serum cTnI concentrations and duration of inotropes were significantly greater with increasing severity of HIE ($p < 0.0001$ and $p < 0.001$ respectively, Kruskal-Wallis test).

Conclusion: Cardiac troponin I concentrations correlate strongly with clinical grade of HIE and with duration of inotropic support in asphyxiated neonates. These data suggest a direct correlation between clinical severity of HIE and the severity of myocardial dysfunction.

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EVALUATION OF PAROXYSMAL ACTIVITY ON AEEG AND EEG TRACINGS DURING COOL CAP TREATMENT OF ASPHYXIATED NEWBORNS WITH HIE

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Aims: To evaluate the incidence, type and duration of paroxysmal activity on aEEG and simultaneous EEG activity during therapeutic cranio-cerebral hypothermia in term severely and moderately asphyxiated newborns.

Methods: aEEG tracings of 23 newborn infants with severe and moderate HIE undergoing therapeutic cranio-cerebral hypothermia were studied. Single-channel aEEG together with regular EEG were obtained with OLYMPIC GFM 6000 monitor. Bifrontal placement of electrodes was used. An interelectrode impedance was maintained at the level of 5 kOhm. aEEG was monitored continuously from the moment of diagnosis of HIE to the 15-th day of life. All the aEEG tracings during the entire period of aEEG monitoring were reviewed together with regular EEG tracings in zones of concern.

Results: There were "saw tooth" patterns or episodes of elevation of the lower margin of band of aEEG activity detected in the tracings of all 23 babies undergoing cool cap treatment with simultaneous paroxysmal activity on EEG. In all the patients these encephalographic changes were treated with phenobarbital. In 14 cases aEEG seizures were observed together with clinically apparent seizures, at least before cooling. In majority of patients aEEG seizures were observed throughout and beyond the period of head cooling despite the phenobarbital treatment.

Conclusions: Electroencephalographic seizures are common in asphyxiated newborn undergoing neuroprotective hypothermia, in many cases without clinical manifestations. aEEG monitoring may be helpful in evaluation of CNS condition and indicates that the anticonvulsive treatment probably needs to be enhanced during cranio-cerebral hypothermia.

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INFLUENCE OF DIFFERENT MODES OF DELIVERY ON SUCCESSFUL BREASTFEEDING FOR HEALTHY TERM INFANTS

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Objective: The objective of this study was to explore how different modes of delivery influenced on successful breastfeeding for healthy term infants.

Methods: The subjects studied were 1,167 healthy term infants and their mothers in Takatsuki General Hospital with tertiary perinatal center in 2008. All of them were encouraged with early skin-to-skin contact, rooming-in and breastfeeding on demand after delivery, and continuously supported in breastfeeding after discharge. They were classified into a vaginal delivery (VD) group and a cesarean section (CS) group, which were prospectively surveyed and compared with regard to the number of breastfeeding within 24 hours after birth, weight loss, exclusive breastfeeding rate in hospital, and breastfeeding rate at the hospital discharge and at 3-month-old checkup.

Results: Of all 1,167 subjects, 917 and 250 of them belonged to VD group and CS group respectively. Average number of breastfeeding within 24 hours after birth was 8.5 times in VD group and lower 7.9 times in CS group. Average weight loss was larger