

6 months of age. The formulas contained the same protein amount (13.1g/L) but different concentrations of α -lactalbumin and casein-glycomacropeptide: (1) standard formula (11% α -lactalbumin/14% casein-glycomacropeptide; n=10), (2) α -lactalbumin-enriched formula (25% α -lactalbumin/15% casein-glycomacropeptide; n=11), and (3) α -lactalbumin-enriched/casein-glycomacropeptide-reduced formula (25% α -lactalbumin/10% casein-glycomacropeptide; n=11). Ten exclusively breastfed infants were recruited as a reference. At 5.5 months of age, infants were given ^{58}Fe with one of their feeds. Blood samples were collected 14 days later for fractional iron absorption and serum ferritin determination.

Results: Mean (\pm SD) iron absorption was $10.3\pm 7.0\%$ from standard formula, $8.6\pm 3.8\%$ from α -lactalbumin-enriched formula, and $9.2\pm 6.5\%$ from α -lactalbumin-enriched/casein-glycomacropeptide-reduced formula, with no difference among the three formula groups ($P=0.92$). Iron absorption from all three formulas was $9.4\pm 5.8\%$ compared to $12.9\pm 6.5\%$ from breastmilk ($P=0.73$). In the formula-fed infants, but not the breastfed infants ($P=0.51$), iron absorption was negatively correlated with serum ferritin ($P=0.01$), and was higher ($P=0.01$) in infants with serum ferritin $< 12\mu\text{g/L}$ ($16.4\pm 12.4\%$) compared to those with serum ferritin $\geq 12\mu\text{g/L}$ ($8.6\pm 4.4\%$).

Conclusions: α -Lactalbumin and casein-glycomacropeptide do not affect iron absorption from low-iron formula in healthy term infants. Low serum ferritin concentrations enhance iron absorption from infant formula.

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HYPOTHERMIA-TREATED INFANTS WITH HIE: MRI FINDINGS IN RELATION TO SHORT-TERM OUTCOME.

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Background and aims: Induced moderate hypothermia (HT) reduces neurodevelopmental disabilities in full-term infants with moderate/severe HIE. Pathological findings on MRI correlate to outcome.

We investigated whether pathological findings on MRI after HT treatment predicted short-term neuromotor outcome in HIE infants.

Methods: Between May 2006 and December 2009, 69 infants were treated with HT (33.5° C for 72 hours). MRI was performed on day 5-15 (median 8) in surviving infants. Patterns of injury were defined as: watershed (WS), basal ganglia/thalamus (BGT), or global(G) predominant pattern on MRI by two blinded readers. Motor functions were assessed at 4, 12 and 24 months of age. All included infants had reached the age of 4-months.

Results: Out of 69 HT-treated infants 61 had a MRI examination; 3 parents did not consent and 5 infants died. Two infants were lost for the 4-months follow up. WS-pattern was seen in 5 (9%), BGT pattern in 11 (19%), and global lesions in 2 (3%). Pathological 4-months outcome was found in 10/11 infants with BGT-pattern. None of the infants with WS or normal MRI had abnormal score on the Alberta Infant Motor Scale (AIMS) at 4 months of age. In the infants with global lesions, care was discontinued after the MRI examination.

Conclusion: Among asphyxiated infants treated with HT, only those with abnormalities in basal ganglia/thalamus on MRI showed pathologic short-term neuro-motor outcome.

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SURFACTANT DIPALMITOYL PHOSPHATIDYLCHOLINE KINETIC IS MARKEDLY IMPAIRED IN TERM NEWBORNS WITH PNEUMONIA

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Background and aims: The efficacy of exogenous surfactant treatment in term newborns with pneumonia is still undetermined. Aim of the study is to assess surfactant dipalmitoyl phosphatidylcholine (DPPC) kinetics in newborns with pneumonia using U^{13}C -DPPC as tracer.

Methods: Nineteen full-term newborns requiring mechanical ventilation were enrolled: 9 had severe