high-blood-glucose-levels/-ketonuria-in all but(n=2) where ketonuria was negligible.Interventions-were-directed,-/-established-guidelines-for-DKA-HHS-/relevant associations/-emerging-complications-driven. Comparatively, Intractability, brittleness,-evanescence--Somogyi-Dawns-Phenomena/-poor outcome were more common in the cases presenting unusually/atypically/or with rare associations.

Conclusions-importance: This study reiterates the need for an early-structured-approach to the evaluations,-management of-DKA-HHS presenting-atypically,-or-with an uncommon/-rare-remarkable associations.Identifying these unusual/-striking associations are crucial because specific adjunctive-interventions-differ.An obligatory base-line-interval-investigations is recommended for all cases with unusual features-associations,-/-tardively-resolving comatose-states,-labile blood-glucose-profiles,-lactic-acidosis,-shock, /cases with the need for overenthusiastic insulin,-fluid, -electrolyte,-applications,-MRDM,-Mariucs syndrome,and the other therapeutically-difficult cases with severe abdominal pains. In such challenging cases minimum-investigations including relevant,-imaging,-coagulations-serological,-complete-haematological-studies,-in addition to others which will be emerging- complications-driven, is proposed for children living between the-Tropics-of-Cancer-Capricorn, also a mandatory- Pancreatic-function /abdominal-Ultrasonographic evaluations to exclude-disseminated-FCPD,and LFT-tests to rule out hepatic-cirrhosis,-CLL,-hepatic-infiltrations-steatosis will be worthwhile. In all concerned cases,-investigations/ interventions-should be more aggressive/-comprehensive.

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BILIRUBIN UPREGULATES GENE EXPRESSION OF SLC7A11 AND INCREASES CYSTINE UPTAKE MEDIATED BY SYSTEM X_c⁻ IN SH-SY5Y NEUROBLASTOMA CELLS

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Background and aims: Severe neonatal hyperbilirubinemia can produce encephalopathy. We have previously demonstrated that exposure of SH-SY5Y cells to unconjugated free bilirubin (Bf) for 24 h induces several genes as the both components of

a glutamate-cystine antiporter (System X_c⁻). Cystine is implicated in glutathione (GSH) formation.

Present study was performed to analyze if the upregulation of System X_c⁻ induced by Bf offers protection from oxidative stress.

Methods: Cell viability was assessed by MTT test in SH-SY5Y cells exposed to 140 nM Bf for 24 h (T0). [¹⁴C]-cystine uptake was measured with and without l-quisqualate (an specific System X_c⁻ inhibitor). Cells were then growth in medium for 48h (T48) and 156h (T156) in the absence of Bf. GSH level and viability were measured after H₂O₂ exposure.

Results: Cell viability was reduced 30-40% after 24 h of Bf exposure. Cystine uptake was increased in surviving cells after 24 h Bf exposure. Further incubation with l-quisqualate for 4 h reduced cystine uptake to normal levels. GSH levels were 2.5 times that in control cell both at T0 and T48 but returned to normal levels at T156. Cells were protected from H₂O₂ exposure when GSH levels were high, but cells death was identical to controls at T156 when GSH levels returned to basal levels.

Conclusions: SH-SY5Y cells respond to Bf exposure by an increased gene expression and activity of the System X_c⁻. This was associated with a higher incorporation of cystine and GSH content which protected the cell from oxidative stress H₂O₂ induced.

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HYPOTHERMIA TREATMENT PROLONGS THE POSSIBLE TIME TO RECOVERY OF AEEG TO PREDICT NORMAL COGNITIVE AND MOTOR OUTCOME

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BACKGROUND AND Aims: This study aims to investigate the correlation between amplitude-integrated EEG (aEEG) and outcome at 24 months in full-term infants treated with systemic hypothermia after perinatal asphyxia and moderate/severe hypoxic-ischemic encephalopathy (HIE)

Methods: In 2007, 21 infants with HIE were treated with systemic hypothermia (body temperature 33-34°C for 72 hours) using a Thecoterm® device.

aEEG was continuously monitored and the level of encephalopathy assessed. Follow-up of cognitive, language and motor function according to Bayley III Scales (BSID) was carried out at 24 months of age.

Results: All 12 children with normal BSID normalized their aEEG background pattern within 48 hours. Adverse outcome, defined as cerebral palsy (CP)/frank neurological or cognitive abnormalities/death, was seen only among infants with persisting pathological aEEG at and beyond 24 hours. 5 children were lost to follow up.

Outcome	Number of children	Time to normalized aEEG
Normal BSID	12	~48 hours
Frank neurological/cognitive abnormalities	0	
CP	2	24 hours/48 hours
Ad mortem	2	Failure to normalize

[Table1.]

Conclusion: With the exception of 2 children, a normalization of aEEG within 48 hours was associated with good outcome at 24 months of age. The 2 children who developed CP showed a normalization of aEEG at 24 and 48 hours respectively. Further follow-up is necessary to fully evaluate cognitive functions.

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EFFECT OF SILDENAFIL ON VEGF EXPRESSION IN THE POSTNATAL MURINE BRAIN AFTER HYPOXEMIC INJURY

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Background: Sildenafil is a potent and selective inhibitor of cyclic guanosine monophosphate-specific phosphodiesterase type 5 that results in arterial vasodilation. Thus, sildenafil has been proposed as an alternative treatment of Persistent Pulmonary Hypertension of the Newborn. However, very little is known on the adverse effects of sildenafil, specifically on the CNS. Its administration enhances

functional recovery and increases neurogenesis and vasculogenesis in the adult rat after stroke. In the developing brain the effects of sildenafil remain unknown.

Objective: To determine the effect of sildenafil on vasculogenesis after hypoxic injury in a rat pup model.

Design/Methods: Sixteen male Wistar rat pups were randomly assigned at P10 to receive Sildenafil 5 mg/kg/day or sterile water three hours before being subjected to hypoxic conditions. All animal were exposed to FiO₂ of 10.4% for 10 minutes. On P25 animals were euthanized, brains removed fixed, and paraffin embedded. Immunohistochemistry using anti VEGF antibody was performed, VEGF positive cells were counted in 16 fields in three different slides for each animal. Results were expressed as mean± SD.

Results: All animals survived the experimental conditions. There was no significant difference in the number of VEGF- positive cells between control and sildenafil-treated pups (254 ±31 cells vs. 273 ± 26 cells, respectively)

Conclusions: In our animal model of hypoxic injury of the developing brain, sildenafil does not seem to have a significant effect on vasculogenesis as determined by VEGF expression. Further assessment of vasculogenesis by other methods and /or under different conditions is needed.

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INTER AND INTRAHEMISPHERIC EEG NONLINEAR SYNCHRONIZATION IN CHILDREN WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER

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Aims: To assess inter and intra EEG functional connectivity of children with Attention Deficit