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.

581

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

J. Nirapil¹, K. Nieto Aguirre², M. Rogido¹, C. Ridaura³, V. Lima²

¹Atlantic Neonatal Research Institute - UMDNJ, Morristown, NJ, USA, ²Universidad Autonoma, San Luis Potosi, ³Instituto Nacional de Pediatría, Mexico, Mexico

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.

582

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

L.D. Méndez¹, S. Mañas¹, M.R. Duque², P.J. Rodríguez³, E. Pereda⁴, L. De Vera⁵, J.J. González⁵

¹Unit of Clinical Neurophysiology, University Hospital Nuestra Señora La Candelaria, Tenerife, Spain, ²Unit of Pediatrics, University Hospital Nuestra Señora La Candelaria, ³Hospital de Día Infantil y Juvenil 'Diego Matías Guigou y Costa', Tenerife, Spain, ⁴Department of Basic Physics, University of La Laguna, ⁵Department of Physiology, Faculty of Medicine, University of La Laguna, Tenerife, Spain

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