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ABSTRACT

EAPS Congress 2016

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Invited Speaker Abstracts

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EAPS-1570
Educational Symposium 1: Preventive health care

Is hip screening by ultrasound worthwhile

R. Schmid[1]
[1], *Baar, Switzerland*

Developmental dysplasia of the hip (DDH) is the most frequent "inborn" malformation on the musculoscelettal system. Its prevalence varies significantly amongst different ehnies and is estimated to be 1-2% in Switzerland.
The ultrasound method of Prof. R. Graf (Austria) is gold standard for earliest detection of DDH in babies. It not only detects dislocation of the hip, but also quantifies the degree of dysplasia, using a geometric measurement system.
DDH can be healed quite simply, if detected early - which has an important impact on individual health and abilities.
Experiences from screening-like programs in Switzerland and from a help project in Mongolia (www.smopp.ch) including the data from a large screening study are presented and shall be the basis for analysis and discussion.

2
EAPS-1559
Educational Symposium 2: Child with asthma

Education of the asthmatic patient or his/her parent

M. Schöni[1]
[1], *Switzerland*

EDUCATION OF THE ASTHMATIC PATIENT OR HIS/HER PARENTS
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Education for asthmatic children and/or parents is essential for the understanding of the disease and the therapy. Whether it is done in educational classes (i.e. lessons for parents or children) or individually depends on the availability of sources, professionals and caregivers. Years of practicing teach us, that individual education seems to be far more efficient than learning classes. In individual counselling the health professional can teach and demonstrate on the individual patient the topics which must be covered: questions to the diagnosis itself, speculations or facts of the reason for asthma, preventive and clear actions to be taken in the individual case, testing for therapeutic interventions and modalities (i.e. choice of medication, device for inhalation, technique of inhalation etc.), and control of success of failure for the therapy.
In most cases the failure to get success in the leading and treating asthmatic children is based on wrong application of medication, bad or wrong technique of handling inhalation devices, compliance and adherence to and with medication, wrong medicaments and finally wrong diagnosis.
The personal and individual approach however is time consuming, needs personal engagement and at least an interpersonal contact that must be based on understanding each other (from language to empathy). It also needs control, repeated contacts and good follow-up. When being aware, that compliance with therapy in asthma ranges between 20-60% the personal approach is demanding.

3
EAPS-1578
Educational Symposium 3: Update in pulmonary hypertension

New treatment strategies in pediatric pulmonary hypertension

M. Beghetti[1]
[1], *Switzerland*

Pulmonary hypertension is a hemodynamic condition occurring rarely in newborn, infants and children. Nevertheless, it is associated with significant morbidity and mortality. When characterized by progressive pulmonary vascular structural changes, the disease is called pulmonary arterial hypertension (PAH). It results in increased pulmonary vascular resistance and eventual right ventricular failure and death. In the vast majority of cases, pediatric PAH is idiopathic or associated with congenital heart disease, and contrary to adult PAH, is rarely is associated with connective tissue, portal hypertension, HIV infection or thromboembolic disease. Although there is still no cure for PAH, quality of life and survival have been improved significantly with specific drug therapies. These treatments target the recognized pathophysiological pathways of PAH with Endothelin-1 receptor antagonists, Prostacyclin analogs, and Phosphodiesterase type 5 inhibitors whereas new pathways are currently explored. However beside sildenafil in Europe no medical therapies have been formally approved for pediatric PAH. Non medical therapies such as atrioseptostomy and Potts shunt have shown beneficial effects. Lung transplantation remain the final cure. Nevertheless, the management of pediatric PAH remains challenging, therapeutic strategy and treatment goals depending mainly on results from adult clinical trials and pediatric experts. We will discuss the current drug therapies available for the management of pediatric PAH.

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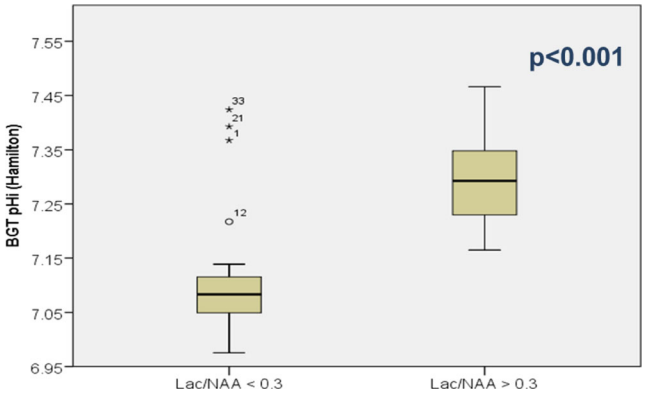
EAPS-1566
Educational Symposium 4: Update in neurocritical care

Post-cardiac arrest management

H. Krishnan Kanthimathinathan[1]
[1], *United Kingdom*

Paediatric cardiac arrest remains a devastating event. Good neurological survival is still unfortunately rare after out-of-hospital (1-4%) and in-hospital cardiac arrest (25-35%). Paediatric cardiac arrests differ from those in adults. They are predominately secondary to hypoxia rather than



There is an association between poor outcome, alkalosis and increased CBF in the DGM.

Conclusions

Brain alkalosis within 15 days of life in NE is associated with seizure burden in the first 90h. Avoiding rebound alkalosis could be a new target for treating neonatal seizures in NE and neuroprotection. Localised brain pHi predicts outcome, as described in whole brain pHi in the pre-cooling era.

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EAPS-0915
Short Oral Session 16: Perinatal asphyxia

UMBILICAL CORD BLOOD BASE DEFICIT PREDICTS THE DEVELOPMENT OF HYPERBILIRUBINEMIA IN HEALTHY TERM AND NEAR TERM NEWBORNS

K.A. SIMBI[1], *F. De Luca*[2], *G. Straface*[1], *V. Zanardo*[1]
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Background and aims

The recognition, follow up, and early treatment of neonatal jaundice has become more difficult, since early discharge of newborns from hospital has become common practice. This prospective study was undertaken to test the predictivity of cord blood acidemia at birth for developing significant hyperbilirubinemia at 36 hours of life.

Methods

A total of 537 healthy term and near term newborns admitted in Maternity Ward of Policlinico Abano Terme (Italy) underwent total serum bilirubin (TSB) neonate predischarge measurement. Neonates with TSB ≥9 mg/dl at 36 hours of life were defined to have significant hyperbilirubinemia, level ≥75% on TSB nomogram of Bhutani et al. (Pediatrics 1999;103:6–14).

Results

133 of 537 newborns (24.8%) screened had TSB ≥9 mg/dl at 36 hours of live, high intermediate "risk zone". When the hemogasanalysis component levels of the newborns who did and who did not developed significant hyperbilirubinemia were compared, those who later developed significant hyperbilirubinemia had significantly higher lactacidemia levels and lower HCO_3 and deficit base levels at birth. In addition, logistic regression analysis showed that base deficit significantly predicts (OR=0.593, p=0.005) the risk of significant hyperbilirubinemia and the hyperbilirubinemia risk increases by 40% with the increase of 1 mEq/l of base deficit. [HCO_3 20.71, ± 2.37 versus 21.29, ±2.25; p=0.01; BE -3.52, ±3.18 versus -2.68 ,±3.26; p=0.01].

Conclusions

In conclusion umbilical cord blood gas analysis is a reliable diagnostic test for intrapartrum hypoxic stress, with significant predictive estimate regarding bilirubin risk zone on an hour specific bilirubin nomogram in healthy neonates.

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EAPS-1080
Short Oral Session 16: Perinatal asphyxia

PROGESTERONE AS NEUROPROTECTANT AFTER PERINATAL ASPHYXIA

R. Solberg[1], *F. Proietti*[2], *H.T. Garberg*[3], *M.U. Huun*[3], *S. Perrone*[2], *M. Longini*[2], *O.D. Saugstad*[3], *G. Buonocore*[2]
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Background and aims

Perinatal hypoxic-ischemic brain damage is a major cause of acute mortality and chronic neurologic morbidity in infants and children. Recently progesterone has shown promising results if given after traumatic brain injury. Measuring lipid peroxidation(LP) is an excellent and reliable method for quantifying oxidative stress after hypoxia-ischemia.

The aim was to explore if progesterone given i.v. after severe neonatal hypoxia could attenuate lipidperoxidation in brain tissues.

Methods

Global hypoxia was induced in newborn piglets (age 12-36h) until BE-20mmol/L or mean arterial blood pressure< 20mmHg. They were reoxygenated with ambient air, one group (N=12) got 8mg/kg progesteron dissolved in the vehicle 2-hydroxypropyl-β-cyclodextrin i.v., another group(N=10) got 2ml/kg vehicle (Cyclodextrine) i.v. and a reference group just received 2ml/kg saline i.v.(N=11). The piglets were observed for 9,5 hous after end hypoxia. Brain tissues from prefrontal cortex, hippocampus and from white matter were sampled and the levels of isoprostanes(IsoPs), Di-homo-isoprostanes(di-HomoIsoPs), neuroprostanes(NPs) and neurofurans(NFs) determined by Liquid Chromatography Triple Quadripole Mass Spectrometry.

Results

There was significant less lipid peroxidation after treatment with progesteron dissolved in cyclodextrin, or cyclodextrin alone, compared with the reference group exposed to a similar severe hypoxia –ischemia. P<0.001-0.05 for NPs, NFs, di-homoIsoPs in cortex, hippocampus and white matter and for |IsoPs in cortex and hippocampus.