In the 21 infants with no ORT, assessed by clinical definition of oxygen at 36 weeks’ GA: no alteration in treatment differences.

Conclusions In infants <1000g NIPPV does not confer further benefit nor risk for survival free of BPD at 36 weeks’ GA compared to nCPAP.

The ProPrems randomised trial investigating the effects of probiotics on late onset sepsis in very preterm infants

Abstracts

Abstract 171 Table 1 Outcome data

<table>
<thead>
<tr>
<th>Outcome</th>
<th>NIPPV</th>
<th>nCPAP</th>
<th>Adjusted OR (95% CI)</th>
<th>p</th>
</tr>
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</tr>
<tr>
<td>Supporting analysis: death or birth weight &lt; 1500g (19.3)</td>
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Oxytocin, vasopressin and social bonding: implications for novel therapies for autism

Oxotocin and vasopressin receptor activation in the mesolimbic dopamine reward pathway plays an important role in social bond formation. We have identified genetic polymorphisms that robustly predict neuropeptide receptor expression in the brain, which in turn predicts social behaviors, including susceptibility to the impact of early social stressors on later life social attachment. There are remarkable parallels between those studies in voles and recent studies in humans which suggest that these mechanisms are highly conserved from rodent to man. In humans, intranasal delivery of oxytocin enhances eye gaze into the eyes of others, the ability to infer the emotions of others from facial cues, empathy, and socially reinforced learning. These observations suggest that the oxytocin system may be a viable target for novel pharmacological strategies for improving social cognition in autism spectrum disorders. Drugs that stimulate endogenous oxytocin release may be useful as an adjunct therapy for behavioral interventions for autism.

Clues for the neurodevelopmental prognosis of the high risk preterm and term newborns

K Gucuyener. Pediatric Neurology, Gazi University Faculty of Medicine, Ankara, Turkey

Maternal diet and type 2 diabetes in the offspring

S Ozanne. University of Cambridge, Cambridge, UK
It is over twenty years since epidemiological studies revealed that there was a relationship between patterns of early growth and risk of developing type 2 diabetes in later life. Studies of identical twins, individuals who were in utero during periods of famine and animal models have provided strong evidence that the early environment, including early nutrition, plays an important role in mediating this relationship. The concept of “early life programming” is therefore widely accepted. However the mechanisms by which a phenomenon that occurs in early life can have long-term effects on the function of a cell and therefore metabolism of an organism many years later are still emerging.

These include:
1. Permanent structural changes in an organ due to exposure to suboptimal levels of essential hormones or nutrients.
2. Permanent effects on regulation of cellular ageing through increases in oxidative stress and mitochondrial dysfunction leading to DNA damage and telomere shortening.
3. Persistent alterations in epigenetic modifications (including DNA methylation, histone modifications and miRNAs) leading to changes in gene expression.

Several transcription factors have been shown to be susceptible to programmed changes in gene expression through such epigenetic mechanisms. These are conceptually attractive targets of programmed epigenetic regulation, as through regulation of their expression a network of other genes will be regulated. Further understanding of the extent and nature of these programming mechanisms could enable the development of preventative and intervention strategies to combat the burden of diseases such as type 2 diabetes.

**Conclusion** We conclude that Fgf10 may have a protective/regenerative effect on lung injury by increasing secondary septa formation.

**Objective** To analyze circumstances of all consecutive neonatal deaths by HIE over a 10 year period and examine changes along time-setting. Level III Neonatal Intensive Care. Madrid, Spain.

**Design** Retrospective chart review of all neonatal cases with HIE who died from 2000 to 2010 within the neonatal period.

**Results** Of a total 70 infants with HIE, 18 died during the neonatal period. All of them had severe HIE and the mean age of death was 64.4±31 hours of life. In 17 (94%) the death was preceded by an end-of-life decision. 15 by withdrawal or limitation of therapy (W/LT) while ventilated, and 2 by decision of parents not to resuscitate if cardiac arrest. All patients had coma and at least one of the following studies severely altered: EEG, aEEG, US/Doppler or CSF-NSE. The first interview for W/LT happened at 25.7±28.9 hours and the mean time interval since W/LT was initiated until death was 10.5±14 hours. Ten infants (56%) had sedation or analgesia during W/LT and presence of the family at the bedside.