**Cerebral Oxygenation**

**O-025**

**DO SUSTAINED LUNG INFLATIONS DURING RESUSCITATION OF PRETERM INFANTS AFFECT CEREBRAL BLOOD VOLUME AND CEREBRAL REGIONAL OXYGEN SATURATION?**

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**Background and aim**
Sustained lung inflations (SLI) promote lung aeration and alveolar recruitment.

**Methods**
Preterm infants ≥28+0 and <34+0 gestational weeks and need for respiratory support (RS) during postnatal transition were included. Within the first 15 min of life of each subject ΔHb and cTOI were continuously detected by using ‘NIRO-200-NX’ (Hamamatsu Japan).

**Results**
SLI group: RS was started by applying 1–2– SLI for 15sec at 25cmH2O and continued by continuous positive airway pressure (CPAP) or positive pressure ventilation (PPV).

**Conclusion**
Initialising RS immediately after birth by using SLI in preterm infants did not show significant differences in CBV and cTOI compared to control group.

**O-026**

**INFLUENCE OF PATENT FORAMEN OVALE (PFO) ON REGIONAL CEREBRAL OXYGEN SATURATION DURING IMMEDIATE NEONATAL TRANSITION**

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**Background**
During postnatal transition there is a significant association between regional cerebral oxygen saturation of the brain and the shunt via the ductus arteriosus (DA). The influence of the patent foramen ovale (PFO) on the cerebral regional saturation remains as a question.

**Aim**
The aim of the study was to investigate the influence of the PFO on the cerebral oxygen saturation, measured by near-infrared spectroscopy (NIRS) after 15 min of neonatal transition.

**Methods**
Observational study. Term neonates (>37 weeks of gestational age) after elective caesarian section and without any

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**Results**
480 biomarker assays were performed in 80 samples from ten infants. Of correlated positively with BNP, NTproBNP, and VEGF-A, and negatively with PLGF (Table 1). PH measures correlated negatively with PLGF and positively with NTproBNP and Troponin1. Measures of diastolic function correlated negatively with Troponin1 and VEGF-A, and positively with PLGF.

**Conclusions**
1) Plasma biomarker analysis is feasible in infants with PH in CDH.
2) Worsening disease status (impaired oxygenation, PH, diastolic dysfunction) was associated with elevated BNP, NTproBNP, Troponin1 and VEGF-A, and reduced PLGF.
3) The utility of these peptides as disease biomarkers, prognostic indicators, and their role in disease pathogenesis merits further investigation.