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Background and Aims To investigate the role of antenatal versus intrapartum causes in the pathway leading to cerebral palsy (CP) in children born small for gestational age (SGA) at term.

Methods Data on 400488 singleton term live births during 1996–2003 recorded in the Medical Birth Registry of Norway were linked with clinical data for 342 children diagnosed with CP recorded in the CP Registry of Norway. ‘Low’ Apgar score, defined as Apgar score < 4 at five minutes, MRI-findings and subtype of CP were used to assess the timing of the brain injuries leading to CP.

Results In the group of 69 SGA children with CP, six (9%; CI: 4–18) had ‘low’ Apgar scores, and five of these were considered to be of intrapartum origin (7%; CI: 3–16). In the group of 263 non-SGA children with CP, 26 (10%; CI: 7–14) had ‘low’ scores, and 18 of these probably had an intrapartum cause. In addition, an intrapartum cause was assessed as probable in 13 cases among children with Apgar scores > 3. Thus, an intrapartum cause was considered likely in 31 non-SGA children (12%; CI: 8–16), not different from the SGA group ($p=0.31$).

Conclusions Despite increased odds of both low Apgar score and CP among children born SGA, our findings suggest that the role of intrapartum causes in the causal chain leading to CP in these children is limited. Instead the results suggest that the majority of children with CP born SGA have antenatal brain injuries, also supported by MRI-findings.

391 PROPHYLACTIC ANTIBIOTICS AND SEPSIS IN NEONATES BORN THROUGH MECONIUM STAINED AMNIOTIC FLUID (MSAF) - A RANDOMIZED CONTROLLED TRIAL

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Background Most newborns with MSAF receive antibiotics as meconium has been incriminated to increase incidence of both intraamniotic and postnatal sepsis. Due to rising concerns about inadvertent overuse of antibiotics, this practice needs to be systematically evaluated.

Objective To evaluate the role of prophylactic antibiotics on occurrence of neonatal sepsis in term neonates born through MSAF. **Methods** Out of 359 eligible neonates, 109 were excluded based on exclusion criteria and remaining 250 randomized to Study (Antibiotic group - receiving first line antibiotics for 3 days), and Control (No Antibiotic) group. Both the groups were evaluated for sepsis on clinical and laboratory parameters. All neonates were monitored for complications related to MSAF. After discharge babies were followed up for sepsis till 28 days of life.

Results 121 babies were randomized to Antibiotic group and 129 to No Antibiotic group. Of the total 250 neonates, 24 (9.6%) developed suspected sepsis, 8 in Antibiotic (6.6%) and 16 in No Antibiotic group (12.4%) ($p=0.12$, OR 0.5, 95% CI: 0.21–1.22). Culture proven sepsis occurred in 12 babies (4.8%), 5 in Antibiotic and 7 in No Antibiotic group (4.13% vs. 5.42%, $p=0.63$, OR 0.75, 95% CI: 0.23–2.43). The incidence of mortality (2.5% vs. 2.3%), meconium aspiration syndrome (18.2% vs. 15.5%, $p=0.57$) and other complications like air

leaks, PPHN and intracranial hemorrhage was comparable between the two groups.

Conclusions Prophylactic antibiotics in neonates born through MSAF do not reduce the incidence of sepsis. Hence, empiric use of antibiotics without documented evidence of infection should be avoided.

392 PREVALENCE OF THE SYSTEMIC INFLAMMATORY RESPONSE SYNDROME, SEPSIS, SEVERE SEPSIS AND SEPTIC SHOCK IN A NEONATAL INTENSIVE CARE UNIT

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Aim To examine the prevalence of the definitions of the systemic inflammatory response syndrome (SIRS), sepsis, severe sepsis, and septic shock during the first three days of life.

Methods Retrospective cohort study including all term neonates hospitalized at our neonatal intensive care unit within the first 24 hours of life from 2004 to 2010. SIRS and the different stages of sepsis were defined according to the International Pediatric Sepsis Consensus Conference.

Results 476 neonates included had a median birth weight of 3250g (range 1250–5300g), a median gestational age of 38 weeks (37–43 weeks), and 258 (54%) were male. Of 476 neonates included 116 (24%) had SIRS, 61 (13%) had sepsis, 55 (12%) had severe sepsis, and 28 (6%) had septic shock. Among 116 neonates with SIRS the single diagnostic criteria were fulfilled as follows: 37/116 neonates (32%) had fever or hypothermia, 92 (79%) had a white blood cell count >34000/ μ l and/or an immature to total neutrophil ratio >0.1, 115 (99%) had respiratory and 40 (34%) cardiocirculatory symptoms.

Conclusion A quarter of all term neonates hospitalized in our neonatal intensive care unit had SIRS during the first three days of life, half of them had sepsis. The vast majority of infants with sepsis had severe sepsis.

393 HIGH-FLOW NASAL CANNULA VERSUS NASAL CONTINUOUS POSITIVE AIRWAY PRESSURE IN THE MANAGEMENT OF RESPIRATORY DISTRESS SYNDROME

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Background and Aims Although nasal continuous positive airway pressure (NCPAP) in the treatment of respiratory distress syndrome (RDS) is an effective and a non-invasive method, some complications such as septal trauma and intolerance of NCPAP apparatus are occurred. Our objectives are to assess safety and effectiveness of humidified high flow nasal canola (HFNC) as compared to NCPAP in premature neonates with RDS.

Methods Seventy uncomplicated preterm infant (30–35 weeks gestation) with RDS at the neonatal ward of Shahid-Beheshti hospital, Isfahan, Iran, randomized into two groups; Group1 (CPAP) received NCPAP from birth and continued till respiratory distress (RD) and oxygen (O_2) need improved and Group 2 (HFNC) received NCPAP for the first 24 hours after birth, then standard HFNC till RD and O_2 need improved. Short outcomes and some long outcomes compared between two groups.

Results There were no differences in death, duration of hospitalization, failure to treatment, duration of improvement of RD, necrotizing enterocolitis(NEC), patent ductus arteriosus (PDA), Intraventricular hemorrhage (IVH), chronic lung disease (CLD), pneumothorax, pulmonary hemorrhage, apnea, sepsis, duration of hospitalization, duration to reach to full enteral feeding between