(24.57-34.14) weeks of gestation. Median of birth weight was 1175 (575-1490) grams. We measured plasma and urine osmolality and 24 hour urine volume to calculate free water clearance (FWC) for each infant. If FWC was less than 30 ml/kg/day the infant was classified as having a DFT.

Results: There were 38 (51.4%) infants with an abnormal FWC (AFWC) in the study population. The median duration of observed DFT period was 14 (4-44) days. The gestational age at birth was lower for AFWC infants compared to infants with normal FWC (NFWC), 28.29 (24.57-32.86) vs. 30.00 (25.57-34.14) weeks ($p=0.001$). AFWC infants also needed longer ventilator treatment, 2 (0-23) vs. 0.50 (0-23) days ($p=0.046$), nCPAP treatment 30 (0-100) vs. 3 (0-41) days ($p<0.0001$) and longer oxygen supplementation 22 (0-74) vs. 47 (0-163) days ($p=0.011$) than NFWC infants.

Conclusions: Decreased fluid tolerance seems to be frequently connected with exacerbation and prolongation of pulmonary problems in VLBW infants. Fluid restriction might be a more beneficial treatment than diuretics in VLBW infants with prolonged respiratory problems and DFT.

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EFFECT OF INFANTS' POSITION ON SERUM BILIRUBIN LEVEL DURING CONVENTIONAL PHOTOTHERAPY

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Background: Alternating exposure of front and back of infants during phototherapy is widely practiced.

Aim: Compare rate of decline in total serum bilirubin concentration (TSB) during phototherapy in infants treated in supine position throughout versus infants alternating between supine and prone position every 3 h. Further, survey current practice in two Scandinavian countries.

Methods: 112 infants with gestational age above 32 weeks, healthy except for non-haemolytic hyperbilirubinaemia, were randomised to one of the treatment groups. TSB was measured at start-up and after 12 and 24 h of therapy. Transcutaneous bilirubin concentration (TcB) was measured mid-sternum in a subgroup of 10 infants including both groups. A questionnaire about routines for position changes during phototherapy was sent to all 41

neonatal departments in Denmark and Norway.

Results: No significant differences in decline of TSB were observed between the two treatment groups: After 12 h of therapy TSB had decreased 32% in both groups and after 24 h 49% and 50%, respectively. TcB decreased rapidly during the first 150 min of treatment and approached a plateau at 35% of the initial level. In two thirds of Danish and Norwegian departments infants were routinely turned during phototherapy, most often every 3rd h.

Conclusion: No difference in the decrease of TSB was observed whether the infants were turned during phototherapy or treated in supine position throughout. An explanation for this lack of effect of turning infants might be that photobilirubins are mainly produced in the intravascular space. Alternating exposure during phototherapy is widely practiced in Scandinavia.

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MATERNAL CHORIOAMNIONITIS AND ITS IMPACT ON EARLY MORBIDITY OF VERY LOW BIRTH WEIGHT INFANTS

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Objective: To evaluate the impact of chorioamnionitis on early morbidity in very low birth weight infants (VLBW) in a retrospective study.

Methods: 245 VLBW were admitted at the Neonatology Department within the years 2007-2009. The placentas were examined histologically for the presence of acute chorioamnionitis in deliveries of 215 VLBW who were eligible for the study. The incidence of *bronchopulmonary dysplasia grade 2 (BPD2)*, *disorders of gastrointestinal tract* (necrotizing enterocolitis, malabsorption syndrome, ileus of prematurity) and brain injury (intraventricular haemorrhage grade III, periventricular leucomalacia, and posthaemorrhagic hydrocephalus) was compared statistically in subgroups with proven chorioamnionitis and without it.

Results: The group included 215 subjects in total, 110 (51,5%) male and 105 (48,8%) female, with mean birth weight 1069g (range 405-1490g), mean gestational age 28,5 weeks (range 23-36 wks). There were no significant differences in gestational

age and birth weight between the subgroups. 167 (77.7%) deliveries was by Caesarean section. Premature rupture of membrane was found in 59 cases (27,4%) with mean latency period 28 hours (range 2-624hrs). Placental and membranes inflammation was found in 40 (18,6%) placental samples. The incidence of BPD2 was significantly elevated in the subgroup with chorioamnionitis compared to the subgroup without chorioamnionitis (OR= 3,9652, CI 95% 1,8251-8,6149). There were no significant differences regarding brain injury, gastrointestinal complications and death between the subgroups.

Conclusion: This study adds further evidence that choriomnionitis may lead to higher incidence of BPD2 in preterm VLBW infants.

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COMPARABLE BREASTFEEDING RATES ARE ACHIEVABLE IN A HIGH RISK POPULATION

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Background: Although breastfeeding has many benefits the incidence and duration of breastfeeding in preterm infants admitted to neonatal intensive care is less than that of full-term infants (32-46% of premature infants discharged home fully or partly breastfeeding compared to 71% of term infants in the UK). Many parents do not wish their infants to have exposure to alternative methods of feeding as they fear this may affect rates of breastfeeding.

Aim: To assess breastfeeding rates and to establish if there is a link with alternative feeding methods used within neonatal services and poor breastfeeding outcomes.

Method: Prospective study of infants requiring admission to neonatal services. Data were collected on gestation, birth weight, diagnosis, intravenous fluids, enteral nutrition and feeding method 6 weeks post discharge.

Results: 100 infants were included: 64 preterm and 36 term, 54% < 2.5 kg and 24% < 1.5 kg. 52% of infants had received bottle feeds. Bottle feeding did not affect success of breastfeeding. Breastfeeding was fully established in 48% of infants at discharge. 61% of infants were fully or partially breastfed at 6 weeks of age. Lack of advice/ support was implicated in 11-12% of breastfeeding discontinuation.

Conclusions: Breastfeeding rates are low but comparable to hospital overall rates despite initial respiratory distress in 45%, hypoglycaemia in 34% and requirement for intravenous fluids in 65%. Early bottle feeding to wean from intravenous fluids did not decrease the incidence of breastfeeding at discharge or 6 weeks of age.

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PHOTOTHERAPY (PT) IN THE NEAR-TERM NEWBORN (NB): ARE THE GUIDELINES SUFFICIENT? CURRENT PRACTICE IN SWITZERLAND

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Background: PT for hyperbilirubinemia in the NB is well established. Guidelines (GL) are based on the updated latest AAP guidelines. This is a 1st step to evaluate current ICU practice

Method: A survey of cardiopulmonary side-effects (CPSE) and -monitoring (CPM), nutritional management and duration was sent to all Swiss neonatal and pediatric ICUs. Statistics are descriptive and results confronted to the literature.

Results: Of 32 surveys, 27 were returned (incl. all level III units). 26 units had GL for all ages and 25 followed the updated GL. Of 25 that admitted NB born ≤ 35 0/7 weeks of gestation (WG), 22 had specific GL for this group. Top 4 PT side-effects were: hyper-/ hypothermia, irritability, poor weight gain/ feeding issues. Tachy-, bradycardia, tachypnea and apnea were less frequent. 4 units require ECG and SpO2 monitoring, 4 monitor by SpO2 only while 19 do not require either. 1 unit always adds fluids, breastfeeding is continued.

70% do not apply any CPM during PT despite evidence for CPSE. Reports on cardiopulmonary changes secondary to PT exist but clinical relevance is unclear. Additional fluids remain controversial as they are not recommended, despite reports of shorter PT and ICU stays. Further reports claim that breastfeeding is enough in this context.

Conclusion: Current GL state TSB levels for PT start. Duration, CPM and fluid management aren't addressed. Current Swiss practice does not warrant CPM, a standard duration or supplemental fluids.