<0.0001; IVH: 0.885,0.446; Btwn: 0.0037) and for CA with male gender (LRP:2.817,0.112; IVH: 0.440,0.076; Btwn 0.020). POR differences between groups were noted for EE and each week before first nipple feeding (LRP: 0.750,0.0007; IVH: 0.979,0.827: Btwn: 0.041); and MI and each WPFN (LRP: 0.626,0.027; IVH: 1.248,0.299; Btwn: 0.022). There were differences noted between groups with the number of swallows in a study and BE (LRP: 0.947,0.288; IVH:1.219,0.003; Btwn: 0.003) and EE (LRP: 0.997,0.869; IVH: 0.818,0.001; Btwn: 0.0003).

Conclusions IVH can affect development of SwBr and POR, particularly of AR. Since NNS is usually associated with brainstem function, IVH may be indicative of deeper brain injury. This method may contribute to predicting long-term developmental outcomes.

318 OUTCOME OF PRETERM INFANTS RECEIVING HIGH DOSE INDOMETHACIN

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Purpose of Study Low-dose indomethacin (Ind) is used as prophylaxis for intraventricular hemorrhage (IVH). Our aim was to evaluate IVH and major neonatal outcomes in ELBW infants after exposure to high-dose Ind.

Methods Used In this retrospective case control study, we collected clinical data from electronic medical records of all ELBW admission over 5 years (Jan 2010- Dec 2014). Infants who did not survive for at least 72 hours or had known congenital or chromosomal anomalies were excluded from the study. We evaluated the effect of high-dose Ind on IVH, which was given to neonates for treatment of Patent Ductus Arteriosus(PDA)

Summary of Results We collected data on 141 subjects (47.5% males and 52.5% female) with mean gestational age 26.0+1.4 wks and the mean birth weight 751± 152 g. 35 neonates received high-dose Ind, versus 106 neonates who received low-dose Ind or no Ind. The mean length of hospital stay was 97.3+37 days. Babies who received high-dose IND, were more likely to be female, had a higher incidence of IVH, sepsis, and BPD (p=0.024, p=0.011, p=0.020 respectively). In the regression model, high-dose Ind treatment remained significant (p=0.036) when you have IVH as the outcome.

Conclusions Our data suggests that high-dose Ind is not associated with decreased incidence of IVH. It also shows that ELBW infants who received high-dose Ind treatment have increased incidence of IVH, sepsis and BPD.

319 SERIAL CBC'S TO PREDICT INFECTION IN HEALTHY NEWBORNS WITH MATERNAL CHORIOAMNIONITIS (MC)

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Purpose of Study Because MC is a risk factor for neonatal sepsis, AAP guidelines suggest a sepsis workup & antibiotics for all asymptomatic newborns with MC. At UTMB, we do CBCs at 6 & 24 h after birth, & initiate the sepsis work-up and antibiotics (Ampicillin & Gentamicin, AG) only if the baby develops signs of sepsis or the CBCs suggest infection. The purpose of this study was to evaluate the safety & utility of monitoring serial CBCs in asymptomatic babies >= 35 wks gestational age (GA) with MC.

Methods Used A retrospective chart review was performed of well babies with GA >= 35 wks & MC in 2013 (12 mos). Maternal treatment with antibiotics was required for the diagnosis of MC. IT ratio (immature:total neutrophils) was considered suspicious if >= 0.3. The data were analyzed using descriptive statistics & independent sample T- tests.

Summary of Results The study population included 275 infants (50.9% males). Mean GA was 38.8 wks (35–41 wks) & mean BW was 3368 g (2070–5029 g). 57.8% of the infants were born vaginally. Of 275 mothers with MC, 231 were GBS negative, 28 were GBS positive & adequately treated, 3 were positive but untreated & 12 were unknown (4 adequately treated). 188 (68.4%) of mothers were given antibiotics >1 h before delivery. The first CBC was done at 0–12 HOL (mean 5.85) with mean ANC 14.9 (2.5–35.1) & mean IT ratio 0.29 (0.19–0.88). 40.7% of infants had a suspicious IT ratio on their first CBC. The second CBC was done at 7–32 HOL (mean 22 h) with mean ANC 12.16 (3.5–35.2) & mean IT ratio 0.18 (0–0.89). 18.5% of infants had a suspicious IT ratio on the second CBC.The IT ratio increased on the second CBC in 48 infants, including 26 with normal IT on the first CBC. For the first CBC, the IT ratio was different between the treated & untreated infants (p<0.001). For the second CBC, the IT ratio for the treated group was also different from the untreated infants (p=0.001). Of the 275 infants, 36 (13.1%) were transferred to the NICU for further workup & AG. 1 had a positive blood culture & 21 were treated with AG for >48 h for clinical sepsis. No infants were readmitted for possible sepsis after discharge.

Conclusions In our patient population, using serial CBCs & clinical signs to predict sepsis in babies with MC appears to be appropriate. The increased length of stay & hospital costs associated with AG therapy were avoided in 87% of infants with MC.

320 GROWTH AND TOLERANCE ON STERILE, READY TO FEED DONOR HUMAN MILK

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Purpose of Study To report growth and tolerance data from a US NICU using a new sterile, ready to feed donor human milk (DHM) product.

Methods Used This is a retrospective chart review of growth and feeding tolerance in infants fed DHM (Co-op Donor Human Milk, Medolac Laboratories, Lake Oswego, OR) when mother's breast milk (MBM) was unavailable. Infants were preterm (<37+0 weeks post-menstrual age) identified from DHM logs during the first

Abstract 320 Table 1

Study Period	Feeding Type			Frequency of Intolerance (n,%)	
	MBM	DHM	Formula	DHM	Other
RTBW (n=37)	39%	55%	6%	1/37 (2.7%)	1/37 (2.7%)
Growth Period (n=37)	36%	29%	35%	0%	3/37 (8.1%)
Growth Period: DHM (n=27)	19%	71%	10%	0%	0%

Abstract 320 Table 2

Study Period	Weight Change		Head Change
	Under 2 kg (g/kg/day)	2 kg - Discharge (g/day)	(cm/week)
Growth Period (n=37)	17.1±3.0	30.0±7.4	0.9±0.2
Growth Period: DHM (n=27)	16.3±2.8	31.6±9.9	1.0±0.2

6 months of use (7/1/14 - 12/31/14). Electronic health records were reviewed for medical history, anthropometrics, and feeding history. Growth velocity (g/kg/d while under 2 kg; g/day from 2 kg to discharge), feeding type, and frequency of intolerance (n/group, interruptions to enteral feedings for 24 hours or more due to gastrointestinal intolerance) were calculated from raw data. Data were grouped during two main periods: 1) birth to return to birth weight (RTBW) and 2) the growth period (RTBW to discharge). A separate analysis was conducted during the growth period when feedings were predominantly DHM.

Summary of Results Infants (n=37) were a mean of 31 +1 weeks and 1539 g at birth; 54% were male and 22% were <10th percentile. Infants experienced postnatal weight loss of 9.7±4.2% and returned to BW at a mean of 12±3.7 days. Ninety-five percent of infants received some of their own mother's milk. HM feedings were fortified according to local protocol with HM-based or bovine products. None of the feeding intolerances were diagnosed as necrotizing enterocolitis (NEC).

Conclusions This is the first report of successful use of a new DHM product when MBM was not available. Growth rates were consistent with catch-up growth. Tolerance was the same or better than with other feedings. Use of DHM did not discourage mothers from providing their own milk.

321 CIRCULATING LEVELS OF INTER-ALPHA INHIBITOR INVERSELY CORRELATE WITH PREDICTIVE MODEL FOR SEVERITY OF ILLNESS IN NEONATES WITH NECROTIZING ENTEROCOLITIS, SPONTANEOUS INTESTINAL PERFORATION AND MATCHED CONTROLS

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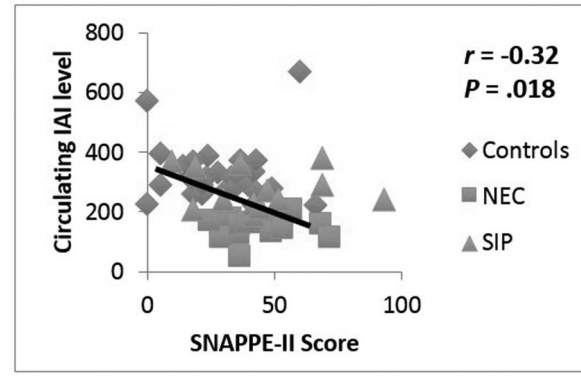
Purpose of Study Inter-alpha inhibitors (IAI) are natural serine protease inhibitors and innate immunomodulators. Circulating IAI levels are significantly reduced in necrotizing enterocolitis (NEC) but remain unchanged in spontaneous intestinal perforation (SIP). Objective was to examine the correlation between circulating IAI levels and predictive model of disease severity in infants with NEC, SIP and matched controls.

Methods Used Prospective observational unmasked study. The Score for Neonatal Acute Physiology Perinatal Extension II (SNAPPE-II) was used to define illness severity & mortality risk based on physiology, laboratory and therapy data for first 12 hours of newborn admission. Following IRB-approved parental consent, blood samples were collected from infants diagnosed with NEC (Bell's stage≥stage 2 or 3), SIP and matched controls. Circulating IAI levels were quantified using competitive ELISA. Spearman correlation was performed at a 0.05 significance level.

Summary of Results A total of 55 infants (14 with NEC, 13 with SIP and 26 matched controls) were included. Circulating IAI levels were inversely correlated with SNAPPE-II scores in neonates with NEC, SIP and matched controls ($r=-0.32$, $p<0.05$).

Conclusions Circulating levels of IAI inversely correlate with predictive model for illness severity and mortality in neonates. As a biomarker, IAI may assist predicting and detecting NEC earlier in at-risk infants assessed by the combined physiologic and perinatal score.



Abstract 321 Figure 1 Circulating IAI inversely correlated with SNAPPE-II scores