

Conclusion Patients with PID had a high rate of PICU admission. Multi-organ failure was associated with mortality. Despite adequate support mortality rates were around 50%.

816 PULMONARY HAEMORRHAGE IN VERY LOW BIRTH WEIGHT INFANTS: 10 YEARS EXPERIENCE IN TERTIARY NICU

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Aims To study the clinical course, associated neonatal morbidity and mortality following pulmonary haemorrhage (PH) in VLBW infants.

Methods Infants < 1500gms that developed pulmonary haemorrhage were identified from the hospital database. Outcome was measured as death or survival following acute PH.

Results Total of 1206 VLBW infants were admitted in our NICU between 2002 to 2011. Incidence of PH was 3%(n=40) in this group. Mean gestational age (SD) was 26±1.8 weeks with mean Birth weight of 0.8±0.2 kg. Cause of preterm delivery was fetal distress n=7, maternal PET n=8, maternal sepsis n=10 and pre-term labour n=10. Eleven of those mothers received antenatal steroids. Antenatal steroids were associated with improved survival (p<0.001). Eight babies had evidence of intrauterine growth retardation and six babies were septic at birth. Five patients required cardiopulmonary resuscitation at birth. The mean age at PH was 47.7±28 hours. Sixteen patients received prophylactic surfactant. Two patients had mild, nine had moderate and twenty-nine had severe PH. Ten cases were treated with surfactant with acute PH. Half of the infants had a PDA. Eighteen patients were coagulopathic at the time of PH. Twenty-one babies died (53%) and none had received antenatal steroids. In the surviving infants, ten developed CLD and six had Mental Developmental Index <70.

Conclusion Our institutional incidence of pulmonary haemorrhage and outcome is similar to other reports in the literature. Comprehensive evidence base management strategies are required to standardise care of the VLBW infants who develop PH.

817 EARLY NEONATAL OUTCOME IN NEWBORNS EXPOSED TO CHEMOTHERAPY DURING FETAL PERIOD

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Introduction Cancer treatment in pregnant women is still a matter of debate as life-saving therapies for the mother and adverse effects for the fetus. Recent data support that chemotherapy from 14 wks GA onwards as safe in terms of early neonatal and long-term outcomes in children, while impaired neurodevelopmental outcome appear to be related to prematurity.

Aim To describe the early neonatal outcome in newborns exposed to chemotherapy during pregnancy.

Methods Clinical data of inborn babies, born between 2005 and 2011, from mother treated with chemotherapy, were retrospectively collected from clinical notes.

Results In our population of neonates exposed to chemotherapy during pregnancy 18% (4/22) were born between 25 and 33 weeks of GA and 73% (16/22) between 34 and 36 wks, 9% at term, (2/22). The 70% was admitted to post-natal ward and the 95% was AGA, while only 5% SGA. Neonatal complications observed were: respiratory distress syndrome 32% (7/22; 3/7 CPAP, 3/7 mechanical ventilation), hypoglycemia 23% (5/22) and jaundice 23% (5/22). Two very preterm babies (< 27 wks) developed intraventricular haemorrhage. Not cardiac complications and not significant hematological abnormalities (neutropenia, severe acute anemia and low platelet count) were observed in the neonatal period.

Conclusions According to our data chemotherapy during pregnancy doesn't seem to influence early neonatal outcome. Otherwise more studies are needed to confirm the safety of cancer treatment during pregnancy in terms of long-term cognitive and neurobehavioural outcomes in order to define treatment strategies aimed to reduce iatrogenic preterm birth.

818 LENGTH OF HOSPITAL STAY (LOS) OF NEONATES UNDERGOING SURGERY AT A TERTIARY NEONATAL UNIT

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Background and Aims Detailed length of stay (LOS) data for infants following surgical procedures are important for prediction of neonatal resources and helpful when counselling parents following a new diagnosis. There are few recent data available on LOS for different surgical conditions in the literature, and none describing a range of procedures from one centre.

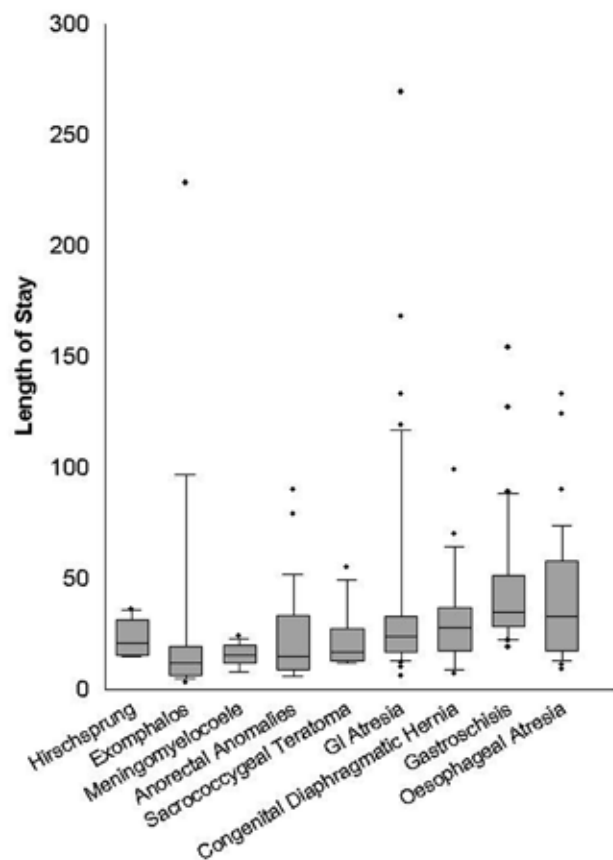
Objective To describe LOS for common surgical procedures in a single centre tertiary referral neonatal unit.

Methods Data were collected for a 5-year period. If babies were transferred to another unit following surgery, these units were contacted to determine total LOS. We included babies that had surgery during their first admission to our unit and who survived to discharge.

Results

Abstract 818 Table 1 All data as Median (Range)

Surgical Condition	Hirschsprung's Disease	Exomphalos	Myelomeningocele	Anorectal Malformation	Sacrococcygeal teratoma	Atresia (Intestinal)	Congenital Diaphragmatic Hernia	Gastroschisis	Oesophageal Atresia
n	7	12	14	25	7	42	23	27	35
GA in weeks	39.5 (35–41)	38.5 (33–42)	39 (36–40)	38 (31–42)	38 (34–39)	37 (31–42)	39 (34–42)	37 (35–39)	38 (34–39)
Total LOS in days	21 (15–36)	12 (3–228)	15.5 (8–24)	15 (6–19)	17 (12–55)	24 (6–269)	28 (7–99)	35 (19–154)	33 (9–133)
Days on our unit	16 (8–32)	7(2–227)	14 (2–23)	10 (3–89)	16 (6–29)	19 (5–120)	22 (5–61)	30 (17–153)	25 (7–123)



Abstract 818 Graph 1 Box and Whisker Plots of LOS

Conclusion Our data for length of stay LOS for following neonatal surgery compare favourably to historical data. Our data show a wide variation in lengths of stay; we believe that median LOS with ranges will enable us to give more detailed information to families at diagnosis.

These data allow more detailed planning of resource allocation when planning admissions of these often complex babies.

819 THE EFFECT OF NEONATAL UNIT CARE LEVEL AND VOLUME ON MORTALITY, DISCHARGE, AND TRANSFER: EVIDENCE FROM ENGLISH HOSPITALS

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Background s/aims: In the US a low volume of admissions is associated with higher mortality in very low birth weight (VLBW) infants leading to recommendations for centralisation of neonatal services. We examined the likelihood of mortality, discharge, and transfer for VLBW and/or < 33+0 week gestation babies in relation to volume of admissions and care level in England.

Methods Competing risks regression, allowing clustering at the unit level, was used with data from the first episode of care. Units were classified by level of care and tertile of volume.

Results Following case-mix adjustment, relative to highest volume level three (highest intensity) units, top-tertile level one was associated with reduced risk of mortality (OR:0.05; CI:0.01–0.35; $p=0.002$). Level one and lower tertile level two units were associated with increased probability of discharge (eg top-tertile level one,

OR:1.91; CI:1.43–2.55; $p<0.001$). Level one and level two units were less likely to transfer (eg top-tertile level one, OR:0.49; CI:0.33–0.73; $p<0.001$). These effects became statistically insignificant once ‘high risk’ babies (with congenital abnormalities, requiring surgery, and born < 29 weeks gestation) were removed.

Conclusions In this UK study we show reduced mortality in level one relative to level three units, and that this difference is explained by a less severe case-mix in lower level units. The majority of care for high risk babies in England is appropriately delivered by high-level units. In the US the case-mix of high- and low-level units is similar. We suggest a network based approach achieves the benefits of centralisation without the disadvantages.

820 LATE PRETERM DELIVERIES AND NEONATAL OUTCOMES IN MULTICENTRE FRENCH REGIONAL PERINATAL NETWORK

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Objective The objective of the study was to present the neonatal outcomes for late preterm birth by gestational age at 33.34 and 35 weeks in a multicentric neonatal network.

Study Design This was a retrospective analysis of neonatal outcomes of late preterm infants (33, 34 and 35 weeks groups) in 5 neonatal care units with one University Hospital Level 3 NICU in one regional perinatal network during 2010. Data were analyzed using Chi(2), Student's Test, and one way ANOVA test.

Results During 2010, the rate of late preterm birth 299/8718 births: 3.42±0.94% without significant difference between the 5 centres. Rates were 0.62%, 1.35% and 1.46% respectively at 33, 34 and 35 wks. There was 19% of twin pregnancy. Vaginal birth rate (57.6%) was not significantly different between groups. Increased gestational age was associated with decreased antenatal steroid use (80.8%, 47.4% and 20.6% respectively; $p=0.001$). Neonatal mortality was 2/299 (0.68%). Postnatal transport was low (4.3% at 33, 4.1 at 34 and 5.6 at 35). Respiratory distress decreased (27.8% at 33 vs 8.5% at 34 and 7.9% at 35; $p=0.001$) without significant difference in the use of surfactant. Feeding problems decreased (20.4% at 33 vs 5.5% at 35; $p=0.01$). There was no significant difference in gestational age at hospital discharge between groups (37.07±1.3 at 33, 36.9±1.2 at 34 and 37.3±1.1).

Conclusion Compared to recent studies the rate of late preterm delivery in our region was similar. Low rate of postnatal transport showed good organization of the regional perinatal network.

821 AN AUDIT OF THE USE OF PICC LINES IN PRETERM INFANTS (< 33WEEKS) IN A TERTIARY NEONATAL INTENSIVE CARE UNIT

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Aim To study the frequency of use, indications for placement and complications associated with PICC line placement in a single tertiary NICU.

Method A prospective review of all the PICC lines inserted over ten-month period. Data was obtained from clinical notes, radiology reports and laboratory results.

Results A total of 71 lines were placed in 53 infants < 33 weeks. 43% (53/131) infants < 33 weeks admitted had PICC line placed. The mean gestational age was 27.7±2.3 weeks and mean birth weight was 1030±332g. The indications for insertion was administration of Parenteral nutrition (86%), Inotropes (11%), and antibiotics (3%). The mean age at insertion was 7±6 days and the average