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
doi:10.1136/archdischild-2012-302724.0816
1A Noshenwan, 'K Bermijo, 'D O’Leary, 1,2E Mollay. 'Neonatology, National Maternity Hospital; 'Paediatrics, University College Dublin; 2Paediatrics, Royal College of Surgeons in Ireland, Dublin, Ireland

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 (<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 NEWBORN EXPOSED TO CHEMOTHERAPY DURING FETAL PERIOD
doi:10.1136/archdischild-2012-302724.0817
1M Fumagalli, 'L Bassi, 'G Scarfone, 'F Peccatori, 'S Pisoni, 'S Passera, 'M Groppo, 'A De Carli, 'I Sirgiovanni, 'F Dessimone, 'F Mosca. 1NICU, Fondazione IRCCS Ca’ Granda, Ospedale Maggiore Policlinico University of Milan; 2Second Obstetric and Gynecologic Clinic, University of Milan and Fondazione IRCCS Ca’ Granda Ospedale Maggiore Policlinico, Milan, Italy

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.

Objectives 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)

<table>
<thead>
<tr>
<th>Surgical Condition</th>
<th>Hirschsprung’s Disease</th>
<th>Exomphalos</th>
<th>Myelomeningocele</th>
<th>Anorectal Malformation</th>
<th>Sacrococcygeal Atresia (Intestinal)</th>
<th>Congenital Diaphragmatic Hernia</th>
<th>Gastrochisis</th>
<th>Oesophageal Atresia</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>7</td>
<td>12</td>
<td>14</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Total LOS in days</td>
<td>21 (15–36)</td>
<td>12 (3–228)</td>
<td>15.5 (8–24)</td>
<td>15 (6–19)</td>
<td>17 (12–55)</td>
<td>24 (6–269)</td>
<td>28 (7–99)</td>
<td>35 (19–154)</td>
</tr>
<tr>
<td>Days on our unit</td>
<td>16 (8–32)</td>
<td>7(2–227)</td>
<td>14 (2–23)</td>
<td>10 (3–89)</td>
<td>16 (6–29)</td>
<td>19 (5–120)</td>
<td>22 (5–61)</td>
<td>30 (17–153)</td>
</tr>
</tbody>
</table>
Abstracts

Conclusion Our data for length of stay LOS for following neonatal care 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 doi:10.1136/archdischild-2012-302724.0819

1S Watson, 1S Petrou, 2W Arulampalam, 3N Modi. 1Warwick Medical School; 2Department of Economics, University of Warwick, Coventry; 3Academic Neonatal Medicine, Imperial College London, London, UK

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 < 35+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:0.49; CI:0.33–0.73; p<0.001). 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 doi:10.1136/archdischild-2012-302724.0820

1M Le Duin, 2C Tripon, 3K Hussein, 1J Cuzzi, 2D Lapevye, 2Y Wardi, 2F Hay-Findler. 1Obstetrics; 2Neonatology; 3Pediatric Intensive Care Unit; 2University Hospital of Poitiers, Poitiers, France

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 T est, 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. V aginal 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 mortal- ity was 0.8% (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) with 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 gesta- tional age at hospital discharge between groups (37.07±1.3 at 33, 36.9±1.2 at 34 and 37.3±1.4).

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 doi:10.1136/archdischild-2012-302724.0821

1A Nosherman, 1I Gill, 1H Walsh, 1S Knowles, 1A Twamey. 1Neonatology; 2Microbiology; National Maternity Hospital, Dublin, Ireland

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 58 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