Results Eighty-eight cases were identified which represents 9.6% of total hospitalizations during the study period. The sex ratio was 1.4. Fifty four percent (n=48) of cases were associated to bacteraemia and only 2 cases of meningitis were noted. Infectious risk factors were acute fetal hypoxia (42%), peripartum maternal fever (35%) and membrane rupture more than 12 hours before delivery (26%). Sixteen percent of all newborns were premature and 19.3% had a low birth weight. 64.8% were symptomatic at birth. The main clinical signs were respiratory distress (82.5%), neurologic distress (17.5%) and fever (12.3%).

Assisted ventilation was required in 11 patients, 5 of whom died. Predictive factors for bad prognosis were prematurity (2 cases), severe hypoxemia (2 cases), nosocomial infections (1 case).

Conclusions We noted a decrease in the mortality rate, due to advances in the neonatal care. However, neonatal streptococcal B infections still remain a significant problem of public health requiring additional preventive and therapeutic management based on systematic screening and antibiotic prophylaxis.

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Abstracts

**P454** SUCCESSFUL EXTUBATION IN VERY LOW BIRTH WEIGHT INFANTS IN A TERTIARY NEONATAL INTENSIVE CARE UNIT

1A Jenkinson, 1D Sweetman, 1,LK McCarthy. 1Department of Neonatology, The National Maternity Hospital, Dublin, Ireland; 2School of Medicine and Medical Science, University College Dublin, Dublin, Ireland

Introduction Prompt extubation of mechanically ventilated very low birth weight infants (VLBW) in the NICU, when clinically ready is in infants’ best interest. It can be difficult to predict which infants will extubate successfully. No one bedside test or clinical sign has proven useful as a predictive tool. Reported rates of extubation failure in preterm infants are as high as 50%. At our level 3 NICU the decision to extubate an infant is at the discretion of the clinical team; there are no set extubation criteria. We aimed to determine the rate of successful extubation at our hospital; and to describe any clinical markers associated with extubation success or failure.

Methods This retrospective review was carried out at the National Maternity Hospital, between January 1st and December 31st2017. VLBW infants with a birth weight (BW) ≤1500 g, that were mechanically ventilated and had a planned extubation attempt during their admission were included. For each individual we included data from the first extubation attempt only.

Results Of the 146 infants ≤1500 g admitted to the NICU, 56 (38%) were intubated and 48(33%) had a planned extubation attempt. The mean (SD) gestational (GA) of the 48 included infants was 28(2) weeks, BW 1097(261)g. Extubation was successful in 82% of infants and was associated with higher GA and BW, and shorter duration of ventilation. At re-intubation, 80% of infants had an additional co-morbidity.

Conclusion The rate of extubation success at our NICU is higher than previously reported. There are multiple potential reasons for this including tertiary antenatal care, few outborn infants, completed courses of ANS, postnatal steroid use; or a conservative approach to extubation. A higher GA and BW, and shorter duration of mechanical ventilation were associated with extubation success.

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**P455** A RETROSPECTIVE AUDIT LOOKING AT HAEMATOLOGICAL ABNORMALITIES IN CHILDREN BORN WITH DOWN SYNDROME IN A TERTIARY MATERNITY HOSPITAL

Sarah Kyne*, Anna Curley. Neonatal Department, National Maternity Hospital, Holles Street, Dublin, Ireland

Background Haematological abnormalities are common in children with Down Syndrome (T21). In the neonatal period, babies can present with polycythemia, neutrophilia and thrombocytopenia. There is also a 150-fold increased risk of myeloid-leukaemia of Down Syndrome usually presenting before five years. This is seen by a transient abnormal myelopoesis (TAM), unique to T21, and associated with the haematopoietic transcription factor gene GATA1. There are increased blast cells (>10%) however, silent presentations do still occur with infants developing ML-DS with <10% blast cells on film.

Aim In this audit, we aimed to examine the haematological abnormalities of babies with T21 born in our centre. Our guidelines state that all children with a suspected diagnosis of T21 should have a full blood count (FBC) carried out in the first few days of life. If there are abnormalities, a blood film is carried out as routine and patients with significant abnormalities are discussed directly with a haematology consultant for further management.

Methods A retrospective lab audit in a tertiary maternity hospital of all 42 babies diagnosed with T21 over a two-year period

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Abstract P454 Table 1

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Successful</th>
<th>Unsuccessful</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>GA, wks</td>
<td>28 (2)</td>
<td>25 (1)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>BW, g</td>
<td>1123 (241)</td>
<td>807 (204)</td>
<td>0.002</td>
</tr>
<tr>
<td>Inborn</td>
<td>36 (90)</td>
<td>6 (75)</td>
<td>0.258</td>
</tr>
<tr>
<td>Male</td>
<td>16 (40)</td>
<td>5 (62)</td>
<td>0.272</td>
</tr>
<tr>
<td>Delayed cord clamping ≥30 seconds</td>
<td>31 (81)*</td>
<td>4 (57)*</td>
<td>0.172</td>
</tr>
<tr>
<td>SVD</td>
<td>16 (40)</td>
<td>6 (75)</td>
<td>0.077</td>
</tr>
<tr>
<td>Duration of mechanical ventilation, hours</td>
<td>42 (19–147)</td>
<td>132 (70–169)</td>
<td>0.026</td>
</tr>
<tr>
<td>Surfactant (ETT)</td>
<td>38 (95)</td>
<td>8 (100)</td>
<td>0.990</td>
</tr>
<tr>
<td>Caffeine</td>
<td>40 (100)</td>
<td>8 (100)</td>
<td>*</td>
</tr>
<tr>
<td>Postnatal steroids</td>
<td>16 (40)</td>
<td>6 (75)</td>
<td>0.077</td>
</tr>
<tr>
<td>FiO2 pre-extubation</td>
<td>0.23 (0.03)</td>
<td>0.27 (0.06)</td>
<td>0.069</td>
</tr>
</tbody>
</table>

*Mean (SD), % (%), Median (IQR); *Missing data
1/42 babies warranted an automatic referral to a tertiary haematologist because of significantly elevated blast cells on film (13%). Five other babies had evidence of blasts cells of 5% or less on their initial FBC with three of these babies having resolution of the blast cells to 0%, One baby was due follow up in a regional centre and one did not have a repeat FBC.

Conclusion The association of T21 with acute leukaemia is well documented. In keeping with international guidelines, our policy is to carry out a full blood count on all babies born with T21. We see that our incidence is less than the 10–15% reported case load of TAM1 with only 1 baby reaching the criteria. This disorder develops over the first five years of life; meaning it is essential these children get annual blood tests for monitoring through their community paediatrician.

REFERENCE

1. Bhatnagar N, Nizey L, Tunstall O, Vyas P, Roberts I. Transient abnormal myelopoi-

Asis and AML in Down syndrome: an update. Current hematologic malignancy

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<table>
<thead>
<tr>
<th>Hb</th>
<th>WCC</th>
<th>Platelets</th>
</tr>
</thead>
<tbody>
<tr>
<td>21.1 (16.9–25.8)</td>
<td>15.7 (9.3–24)</td>
<td>140 (34–271)</td>
</tr>
</tbody>
</table>

Infantile hepatic haemangioendothelioma (IHH) is the commonest benign vascular tumour occurring in the first six

months of life. Medical treatment is first-line but a transcath-

eter arterial embolization (TAE) was also used in this preterm neonatal case; this is an innovative procedure used to reduce hepatic shunting by occluding the feeding vessels.

Case report A 2.09 kg male infant was delivered at 31 +3 weeks by emergency C-section. There were antenatal concerns regarding ascites and dilated bowel loops and at delivery he was noted to have hydrops. He required intubation and high frequency oscillatory ventilation. Extensive bruising and active bleeding from multiple sites was noted, so the massive blood transfusion protocol was initiated. An ejection systolic murmur was heard and he had hepatomegaly.

Initial blood-work showed anaemia and disseminated intra-

vascular coagulopathy. Thrombocytopenia was likely from

Kasabach-Merritt syndrome (KMS). He also had deranged liver enzymes, jaundice and an acute kidney injury. AFP, thy-

roid function tests and urinary VMA were reassuring. Echocar-
diography demonstrated a small PDA and moderately impaired biventricular function. Abdominal ultrasound showed a mixed lesion involving both liver lobes, measuring 8.2×5.7 cm with dilated hepatic veins and ascites. MRI was not possible due to his unstable clinical condition.

A large number of blood products were required including recombinant factor 7. Regular vitamin K and broad-spectrum antibiotics were initiated. Propranolol and dexamethasone were commenced to try to shrink the lesion. On day 3 of life he had embolization of his AVM, this was a novel procedure and involved accessing the coeliac axis via the umbilical artery and releasing micro-particles. Satisfactory devascularisation was achieved.

Despite this innovative technique, it deteriorated secondary to high-output CCF, pulmonary oedema, anuria and hepatic failure. It was apparent to his parents and the multidisciplinary team that he would not survive and life-sustaining care was withdrawn on day 6.

Discussion It is clear that a multidisciplinary approach is required for the best treatment options. Corticosteroids

Manel Charfi, Rim Zaghdoud, Chiraz Regaieg*, Amel Ben Hmed, Amira Bouraoui, Kasabach-Merritt syndrome (KMS). He also had deranged liver enzymes, jaundice and an acute kidney injury. AFP, thyroid function tests and urinary VMA were reassuring. Echocardiography demonstrated a small PDA and moderately impaired biventricular function. Abdominal ultrasound showed a mixed lesion involving both liver lobes, measuring 8.2×5.7 cm with dilated hepatic veins and ascites. MRI was not possible due to his unstable clinical condition.

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