bilateral subdural collection. He was assessed at 10 month of age and found to have no residual disabilities.

Conclusion VZV infection complicated by meningococcal sepsis and meningitis is well reported in the literature; subdural empyema is reported on few occasions; however we found no report with all these complications in a single patient nor in an infant.

575 ILIOPSOAS ABSCESS IN THE NEONATE WITH IMMUNODEFICIENCY

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Psoas abscess is rare, especially in the neonatal period. It may be primary or rarely secondary to extend on from adjacent structures or to bacteremia caused by distant cutaneous infections. Vague clinical presentation may lead to delayed diagnosis. Appropriate drainage is necessary in addition to antibiotic therapy. Here we present a neonate was admitted with subcutaneous abscesses on his wrist and ankle. *Staphylococcus aureus* was isolated from the drainage material and proper antibiotic treatment was begun. On the 7th day of treatment, he developed swelling on his groin and limited hip motion. Septic arthritis was suspected and a magnetic resonance imaging performed revealing an abscess on the right psoas muscle. Drainage and antibiotic treatment led to resolution of abscess. Development of multiple subcutaneous and deep abscesses in newborn period led us to suspect of primary immunodeficiency. In the immunological work up, serum immunoglobulins and lymphocyte sub set analysis were in normal ranges according to age. The phagocytic cell functions were tested with nitroblue-tetrazolium (NBT) slide test were also normal. Flow cytometry analyses revealed CD18 16%, CD11a + CD18 17%, CD11b + CD18 3%, CD11c + CD18 4%. A ratio of 1.89 oxidative explosion, 1.63 phagocytosis and 1.43 chemotaxis (N: >1.5) was determined in neutrophil function tests. Antibiotic prophylaxis was initiated and bone marrow transplantation was recommended. As a conclusion, immunodeficiency syndromes such as LAD should be investigated in newborn with psoas abscess. Our case is important to emphasize underlying factors in the pathogenesis of psoas abscess.

576 GENITAL NECROTISING FASCITIS IN A PREMATURE NEONATE SECONDARY TO GROUP B STREPTOCOCCUS (GBS) SEPSIS

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Background Necrotising Fascitis (NF) is primarily an adult disease but there are pediatric case series also. In the neonate, most cases of NF are attributable to secondary infection of omphalitis, balanitis, mammitis, postoperative complications, and fetal monitoring. Other associations of NF included necrotizing enterocolitis, immunodeficiency and septicemia.

Method Case report and literature review.

Results Baby boy S is a 33 wks gestation with birth weight of 1.9 kgs born to a 21 yr old mum with uneventful pregnancy. She did not have high vaginal swab screening for GBS during pregnancy. He was born in good condition not needed resuscitation. He was cardiorespiratory stable on nasogastric feeds until day 5 when he developed grunting and tachypnoea requiring intubation and ventilation. He required both conventional & High Frequency Oscillatory Ventilation. He was extubated to CPAP on day 13.

He grew Group B Streptococcus (GBS) on blood and CSF culture. He was treated with a 3 week course of IV cefotaxime & benzylpenicillin and was commenced on oral penicillin prophylaxis for 3

months. Localised scrotal skin breakdown noted on day 11 with a rapidly progressive inflammation, necrosis and gangrene skin subcutaneous tissues. Regular dressing with duoderm, supportive care and I.V antibiotic has resolved necrotising fascitis with residual scar.

Genital Necrotising Fascitis

Genital Necrotising Fascitis post treatment

Abstract 576 Figure 1

Conclusion We report the first case in literature of Genital Necrotising Fascitis in premature baby with Group B Streptococcus sepsis and meningitis. It is relatively rare and has a fulminant course with a high mortality rate. We had good result with I.V antibiotic, supportive care and conservative surgical management.

577 OCCIPITAL ENCEPHALOCELE: REPORT OF CASE SERIES

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An encephalocele results from failure of the surface ectoderm to separate from the neuroectoderm. The prevalence ranges from 0.8 to 4 per 10,000 live births. The occiput is the most common site. During a 3 years' period 5 babies with occipital encephalocele were evaluated. All babies were girls. One mother was 45 years old, the others were around 25 years-old. All babies were born with cesarean section. Maternal folic acid (FA) consumption revealed that only 2 mothers used FA irregularly, not beginning preconceptionally. The

rest 3 mothers did not use any supplementation nor any other drugs. One baby had also anencephaly and was lost on the 2nd day of life. The rest babies had hydrocephalus, corpus callosum agenesis, meningomyelocele and underwent surgery. One baby has serious feeding problems thus is on nasogastric feeding. The surviving babies are between 10–26 months, all having physical rehabilitation. Physically the 4 babies are below 3rd percentile both for weight and height. In conclusion, occipital encephalocele is a life-threatening cranial anomaly. The overall outcome of the patient depends on the site and dimension of the lesion, as well as presence of accompanying congenital anomalies. Close multidisciplinary follow-up is needed. FA supplementation should be nationally provoked.

578 SEVEN DAY ANHEPATIC SURVIVAL IN A 19 MONTH OLD CHILD, AN INTERDISCIPLINARY CHALLENGE

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Objective Description of pediatric intensive care and surgical management in a 19 month old child after primary liver-graft-non-function, who was managed anhepatic for 8 days in total and re-transplanted twice.

Case Report A 19 month old boy, 10 kg bodyweight, with ALF of unknown origin received an adult left liver lobe. After all vessels were connected and re-opened the graft showed a massive swelling and perfusion failure due to fulminant micro-vascular rejection and was removed immediately. The portal vein was attached end-to-side to the cava inferior. Thereafter diffuse intra-abdominal bleeding occurred, requiring PPSB, factor VII, mass-transfusion and tranexamic-acid and the child was admitted to PICU sedated and ventilated.

To maintain ammonium, bile acids, bilirubin, and cerebral perfusion within thresholds continuous-single-pass-albumin-dialysis (SPAD) on turnover rates up to 150 ml/kg/h of hemodiafiltration/-filtration was used in total to bridge the anhepatic boy to his first (7 days) and second re-transplantation (1 day). Fresh-frozen-plasma to avoid hemorrhage, water-soluble vitamins, and amino-acids were continuously replaced.

Overall 16 surgical interventions (increased intra-abdominal pressure, portal vein kinking, portal and arterial thrombosis (second graft), removal of mesenterial lymphoid cysts, bile-duct-leak, second re-transplantation with cavo-portal anastomosis, and secondary abdominal wall closure with dermal-porcine-collagen, skin-mesh-grafts) and anticoagulation with argatroban were needed to save the boy.

During the 6 month total hospital stay, including 6 weeks on mechanical ventilation, multiple bacterial, viral and fungal infections were detected that required early and timely antimicrobial treatment.

At 1.5 year follow up the child was alive with intact graft and showed no neurologic sequelae.

579 CENTRAL VENOUS CATHETER COLONISATION AND CATHETER RELATED SEPSIS: LESSONS LEARNT FROM EXIT SITE SKIN SWAB

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Background and Aim Percutaneous central venous catheters (PCVCs) are commonly inserted in neonates after topical antiseptics. Presence of a PCVC is a risk factor for catheter-related sepsis (CRS). We examined the relationship between bacteriology of exit site skin swabs (ESSS) taken at line removal and line colonisation/CRS.

Design/methods For all PCVCs removed, ESSS and three separate PCVC segments (proximal, middle and tip) were sent for bacteriological culture. For clinically-septic neonates a peripheral blood culture was additionally obtained. PCVC colonisation was defined as a positive growth in any PCVC segment from a well neonate. Definite CRS was defined as positive growths with the same organism in any PCVC segment plus the blood culture from a clinically-septic neonate.

Results ESSS were culture-positive for 39/187 (21%) lines removed. Univariate analysis showed that with a positive ESSS, line colonisation was 8 times higher (log odds ratio 2.13 [95%CI: 1.18–3.08], $p<0.001$), and definite CRS was 14 times higher (2.63 [1.14–4.14], $p<0.005$). Adjusting for various covariates, multivariate analysis using a logistic regression model confirmed an increased risk of CRS with a positive ESSS (log odds ratio 2.00 [95%CI: 0.44–3.58], $p=0.01$).

Conclusion Positive ESSS correlate strongly with PCVC-colonisation and definite CRS. Improved topical antiseptics, skin and catheter care is required to reduce the risk of colonised skin insertion sites associated with catheter placement, and the consequent risks of line colonisation and subsequent CRS.

580 A SYSTEMATIC APPROACH TO PREVENTING CENTRAL VENOUS CATHETER-ASSOCIATED BLOODSTREAM INFECTION IN PATIENTS RECEIVING HOME PARENTERAL NUTRITION

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Background and Aims Central venous catheter-associated bloodstream infection (CBSI) is a serious complication in home parenteral nutrition (HPN) patients. Prevention of CBSI in hospitals is well-established, but in the home environment presents additional challenges. We applied hazard analysis and critical control points principles to develop a systematic approach to preventing HPN-related CBSI. Here we describe the corrective actions and their clinical impact.

Methods Factors predisposing to infection, and corrective actions were identified through consensus by a multidisciplinary group of healthcare professionals between April and June 2012. The impact of these actions on CBSI was observed.

Results Key corrective actions were:

1. *Staphylococcus aureus* nasal screening and decolonisation where appropriate.
2. Multidisciplinary discharge planning meetings included consideration of patients' microbiology histories and optimisation of treatment of comorbidities (e.g. atopic eczema).
3. Increased monitoring of line access and care practices at home, aiming to attain the same standards as in hospital.
4. Launch of updated illustrated guide to identification and management of line site problems.
5. Streamlining of microbiology result reporting to facilitate early treatment of local infections.
6. Tauridine locks for one patient with a poor line infection history.

Between April 2011 and March 2012 there were 13 CBSI acquired outside hospital, and during planning and implementation of corrective actions (April–June 2012) there were 4 CBSI. By contrast there was only one CBSI during the in the nine months following full implementation.