Conclusion A multidisciplinary approach to the ongoing management of HPN patients can dramatically reduce their risk of CBSI.

**582** RISK FACTORS FOR CENTRAL-LINE ASSOCIATED BLOODSTREAM INFECTIONS IN CRITICALLY ILL NEONATES
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**Background and Aims** The improvement of central line insertion and maintenance practices has led to reduction but not elimination of central line-associated bloodstream infections (CLABSIs) in critically ill neonates. The objective of our study was to describe CLABSI epidemiology in critically ill neonates in order to identify risk factors for additional prevention strategies.

**Methods** Prospective cohort study in medical-surgical neonatal and pediatric ICU. All neonates admitted between January 1, 2011, and January 31, 2012 with ≥1 central lines were monitored for the development of CLABSI. Risk factors for CLABSI were examined.

**Results** Nine CLABSIs occurred during 1640 central line-days (5.5/1000 central line-days). Seven out of 9 CLABSIs (78%) occurred in neonates with primary surgical diagnosis (gastrointestinal tract anomaly, congenital heart disease, rhabdomyosarcoma), two CLABSIs developed in neonates with hypoxic-ischemic encephalopathy. Neonates with CLABSI had significantly longer ICU length of stay compared to other neonates requiring central line (median 27 vs. 3 days; p<0.0001), higher PRISM III score (median 14.5 vs. 7; p=0.01), more surgical procedures (median 2 vs. 1; p=0.14), longer duration of parenteral nutrition (median 10 vs. 0 days; p<0.0001), needed more vasoressor/inotropic agents (median 2 vs. 0; p=0.002).

**Conclusion** The incidence of CLABSI is significantly higher in neonates with primary surgical diagnosis (particularly gastrointestinal tract anomaly) and with hypoxic-ischemic encephalopathy compared to other neonates requiring a central line. The increased risk of CLABSI in these neonates warrants further study for development of additional prevention strategies.
Abstracts

Background and Aim The aim of this study, the frequency of catheter associated blood stream infection (CA-BSI) and its effect to mortality and length stay (LOS) of hospital.

Methods This study was conducted between November 1, 2010 and February 29 2012, and it is prospective and observational.

Results During study period, 275 patients admitted to PICU. Fifty-six percent of all patients were girl and their mean age were 37±8.7 months. There was CVC in 107(38.9%) patients. Also, there were CVC at vena jugularis interna (VJI) in 48.9%, femoral in 46.7% and subclavian in 4.3% of patients with CVC. There were 23 times CA-BSI in 16 (14.8%) patients. Totaly CVC use day was 1589 days and CA-BSI was14 attack/1000 days within study period. The agents of CA-BSI were A. Baumannii (26%), MR-Coagulase Negative Staphylococcus (21.7%), ESBL (+) Kl. Pneumonia (21.7%), VRE (8.6%), P. Aeruginosa (8.6%). There were 169 patients without CVC and 4 (2.4%) of them BSI. CA-BSI was 88% of all BSI. The LOS of PICU was 43.7±63.7 days in patients with CA-BSI and 11±11.4 days in patients without CA-BSI in patients with CVC (p=0.005). The LOS of PICU in patients without CVC; 29.7±16.1 days in BSI group and 5.1±5.7 days in without BSI group (p=0.001). During study period, 36 (19%) patients died and 5 of them were related CA-BSI.

Conclusion CVC use is severe risk factor for CA-BSI, LOS of PICU and mortality.

CASE-CONTROL ANALYSIS OF ENDEMIC ACINETOBACTER BAUMANNII BACTEREMIA IN THE NEONATAL INTENSIVE CARE UNIT
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Background and Aim Acinetobacter baumannii has become an important cause of nosocomial infection, but little is known about its impact on the neonatal intensive care unit (NICU). We planned to characterize the clinical manifestations and outcomes of patients with A. baumannii bacteremia in the NICU.

Methods All patients with A. baumannii bacteremia in our NICU from 2003–2010 were reviewed. A matched case-control study was performed by comparing each case of A. baumannii to 2 uninfected controls and all cases of Escherichia coli and Klebsiella bacteremia, respectively.

Results 37 sporadic cases of A. baumannii bacteremia were identified. Pan-drug resistant isolate was noted in only 2 cases (5.4%), and the overall mortality rate was 6.1%. Infants with A. baumannii bacteremia had median gestational age and birth weight of 28 weeks and 1090 grams, respectively. Compared to matched, uninfected controls, infants with A. baumannii were more likely to have had a central vascular catheter (CVC) (OR=3.78, 95%CI: 1.44 to 12.35) and longer duration of ventilator use and hospitalization (both P<0.001). Compared to E. coli or Klebsiella bacteremia, infants with A. baumannii bacteremia had lower birth weight (median of 1090gms vs 1300gms, P=0.044) and a higher rate of CVC and TPN use (both P<0.001) at the time of infection.

Conclusions A. baumannii bacteremia occurs sporadically in the NICU, primarily in low birth weight infants on TPN use and with CVC in situ. Although A. baumannii does not often cause mortality and PDR- A. baumannii is uncommon, it contributes significantly to longer hospitalization.

Higher Levels of Inflammatory Markers in VLBW Infants with Catheter Septis Caused by Coagulase Negative Staphylococci Resistant to Oxacillin
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Background and Aims Coagulate negative Staphylococci (CoNS) are most prevalent pathogens in central line associated bloodstream infections (CLABSI) in very low birth weight (VLBW) infants. The aim of this study was to compare CLABSI caused by CoNS in terms of virulence and clinical relevance.

Methods A retrospective observation analysis of all CLABSI caused by CoNS in VLBW infants admitted to our NICU during a 5-year period (2006–2010) was performed. Two groups of CLABSI were compared: the OXAS caused by CoNS susceptible to oxacillin and the OXAR caused by CoNS resistant to oxacillin, in terms of perinatal demographic data, related laboratory signs and clinical data.

Results There were 54 episodes of CLABSI caused by CoNS found in 51 infants. 14 in the OXAS group (average BW±SD: 855g ± 293; average GA±SD: 25.9 wks ± 2.8) and 40 in the OXAR group (average BW±SD: 788 g ± 241; average GA±SD: 26.2 wks ± 2.3). The OXAR group presented a higher maximum CRP levels (median±95%CL: 28±15 mg/l vs. 21±12 mg/l, p=0.047), as well as the maximum values of the I/T index (median±95%CL: 0.23±0.04 vs. 0.19±0.05, p=0.051), higher number of positive blood cultures (median±95%CL: 1±0.14 vs. 2±0.3, p=0.006) and the tendency to a higher incidence of necrotizing enterocolitis (38% vs. 14%, p=0.078).

Conclusions Resistance to oxacillin in CoNS CLABSI has a relevant influence on higher levels of inflammatory markers and the tendency to NEC in VLBW infants.

Cavitating Pulmonary Tuberculosis in Children
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Background and Aim To evaluate the clinical characteristics of children with cavitating pulmonary tuberculosis (PTB).

Patients and methods: We reviewed retrospectively 33 children followed at our hospital with a diagnosis of PTB between April 2007–March 2012 and evaluated the clinical characteristics of patients with cavitary lesions. Tuberculosis (TB) was confirmed by isolation of Mycobacterium tuberculosis (M. tuberculosis) from early morning gastric aspirates, by positive tuberculin skin test (TST), history of exposure to tuberculosis, and/or detection of acid-fast bacilli (AFB) in the early morning gastric aspirates.

Results Seven (21%) of 33 children had cavitating PTB. Median age was 15 years (range 0.4–15.5), with a female/male ratio of 2.5:1. All of them except one patient were ≥12 years old. Three (43%) patients had chronic cough (>4 weeks) and two patients had hemoptysis (1 of them had massive hemoptysis). Contact with a case of TB in the family was available in all of the patients and TST was positive again in 100% of patients. M. tuberculosis was isolated in five (70%) cases. AFB smear positivity was detected in three patients. Chest x-ray and/or thorax computed tomography revealed consolidation in six cases (upper lob involvement in three cases), hilar lymphadenopathy in three and multiple cavities in two cases.

Conclusion Cavitating pulmonary tuberculosis is rare in childhood, but it can be seen especially in older ages. It should be kept on mind that adolescents with cavitary lesions can be potentially contagious and they should be treated with infection control measures.

Perinatal Factors Associated with Multiple Large Cysts on Chest Computed Tomography in Extremely Premature Infants with Chronic Lung Disease
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