Disclosures. All authors: No reported disclosures.

2313. An All-Harm Index Quantifying Central Line Associated Infections and Noninfectious Complications Among Pediatric Oncology Patients
Aml Kelada, MD,1 Timothy Foster,2 Sarah Worley, MS,1 Anne Tang, Prog Analyst 1,2, Venkataraman Arakoni, Lead Systems Analyst 1,2 and Charles B Foster, MD,1
1Pediatric Oncology, Cleveland Clinic, Cleveland, Ohio; 2Undergraduate, University California at Berkeley, Berkeley, California, 1Quantitative Health Sciences, Cleveland Clinic, CLEVELAND, Ohio; 2Quantitative Health Sciences, Cleveland Clinic, Cleveland, Ohio, 1Quantitative Health Sciences (QHS), Cleveland Clinic, Cleveland, Ohio, 2Pediatric Infectious Diseases, Cleveland Clinic Childrens, Cleveland, Ohio
Session: 251. Pediatric Potpourri Saturday, October 7, 2017: 12:30 PM

Background. In contrast to inpatient central line associated blood stream infections (CLABSIs), little attention has been devoted to preventing outpatient CLABSIs or central line associated noninfectious complications (CLANCs). Our aim was to develop and validate a novel index to comprehensively quantify the rates of both CLABSIs and CLANCs among pediatric oncology patients.

Methods. CLABSIs were defined according to CDC/NHSN definitions. CLANCs were defined using a novel classification as noninfectious events resulting in premature removal of the line. 592 oncology patient records (< 24 years; 2006–16) were reviewed. Wilcoxon rank-sum tests were used for continuous and ordinal characteristics and Chi-square or Fisher’s exact tests for categorical characteristics.

Results. 656 CVCs were inserted in 368 patients, for a total of 175,941 catheter days (9.6% inpatient). Events included: 108 CLABSIs (42 inpatient and 66 outpatient) and 89 CLANCs (44 inpatient and 45 outpatient). The all-harm event rate was 1.1 per 1000 CVC days; the sum of CLABS (0.61) and CLANC (0.50) rates. Inpatient rates were: all-harm (4.9), CLABS (0.24), and CLANC (0.25). Outpatient event rates were: all-harm (0.72), CLABS (0.45), and CLANC (0.27). For all lines treated independently, risk ratio of an adverse event was strongly correlated with CVC type (tunneled CVCs vs ports; 11.8; <0.001), age at placement per 1 year older (0.89; <0.001), gender (females vs males; 1.6; 0.021), and tumor type (AML vs Non-AML Leukemia/lymphoma; 4.0; <0.001). Tunneled CVCs carried greater risk for both CLABS (10.8; <0.001) and CLANC (15.2; <0.001) than ports.

Conclusion. We have developed an all-harm index to quantify the total harm associated with central line use. Among pediatric oncology patients with CVCs, major noninfectious complications occur at rates similar to those reported for CLABSIs. Although event rates per 1000 CVC days were lower among outpatients, the total number of infectious and noninfectious harm events was similar in the inpatient and outpatient settings. Additional quality improvement efforts are required to reduce the total harm associated with CVC use, and modifiable factors such as catheter choice could significantly impact the rate of both CLABSIs and CLANCs.

Disclosures. All authors: No reported disclosures.

2314. Risk Factors for Bloodstream Infection in Children with Intestinal Insufficiency on Parenteral Nutrition
Talal Seddik, MD,1 Colleen Nespor, RN, CNS,2 Lu Tian, PhD,2 John Kerner, MD,2 Yvonne Maldonado, MD, FIDSA, FPIDS3 and Hayley Ganis, MD, FPIDS,2 Pediatrics, Stanford Healthcare, Stanford, California, 1Stanford University, Stanford, California, 2Pediatrics, Stanford University School of Medicine, Stanford, California, 3Pediatrics, Stanford University Medical Center, Stanford, California
Session: 251. Pediatric Potpourri Saturday, October 7, 2017: 12:30 PM

Background. Bloodstream infection (BSI) is a major cause of morbidity and mortality in children with intestinal insufficiency, but studies defining risk factors are lacking. We aim to identify risk factors of BSI in children with intestinal insufficiency on parenteral nutrition (PN).

Methods. Retrospective cohort study of children ≤ 18 years of age with intestinal insufficiency dependent on PN, who were followed at Lucile Packard Children’s Hospital (LPCH). The outcome of interest was rate of BSI. We studied proposed risk factors for BSI including sex, age, small intestine length at the time of surgery, diagnosis of short bowel syndrome (SBS), cirrhitilence (a marker of functioning enterocytes mass), central line (CL) days and CL breaks within 3 months. Data were represented in 6-month intervals to study time dependent variables. Univariate analyses using t-test and regression analysis were conducted.

Results. Records between 2014 and 2016 were reviewed identifying 43 children who met the inclusion criteria. The rate of infection was 3.39 per 1000 CL days. Younger age increased rate of BSI by 0.23/1000 CL days per year (95% confidence interval [CI]: 0.14–0.32; P = 0.015) and shorter small bowel increased it by 0.27/1000 CL days for every 10-cm of small bowel (95% CI: 0.14–0.4; P = 0.045). Recent line breaks are important risk factor for BSI; an opportunity for prevention. BSI rates are higher in younger children likely due to immature bowel and/or difficult compliance with hygienic precautions handling CLs. No association was found between CL days and rate of BSI, which would guide the decision of CL removal vs. salvage.

Disclosures. All authors: No reported disclosures.

2315. Incidence and Outcomes of Endophthalmitis Associated Hospitalizations in Children Aged ≤ 20 Years: A Population-Based Cohort Study
Kristen Edwards, MD,1 Vikram Lekhi, MD,2 Michael Parkins, MD3 and Ranjani Somayaji, MD4
1Department of Medicine, University of Calgary, Calgary, AB, Canada, 2Surgery, University of Calgary, Calgary, AB, Canada, 3Department of Medicine; Division of Microbiology & Infectious Diseases, University of Calgary, Calgary, AB, Canada, 4Department of Medicine; Division of Microbiology & Infectious Diseases, University of Calgary and Alberta Health Services - Calgary zone, Calgary, AB, Canada
Session: 251. Pediatric Potpourri Saturday, October 7, 2017: 12:30 PM

Background. Endophthalmitis is a rare but sight-threatening condition in children, and is most commonly attributable to surgery, endogenous spread of infection, and trauma. Few population-based studies have examined the epidemiology and outcomes of neonatal and pediatric endophthalmitis.

Methods. Using the 2012 Kids’ Inpatient Database, a stratified random sample of pediatric (≤ 20 years) discharges from community and non-rehabilitation hospitals in the US, we conducted a cohort study to examine the incidence and outcomes of endophthalmitis. The ICD9-CM search codes included 360.07, 360.13 and 360.19 for endophthalmitis. Our primary outcome was the incidence of endophthalmitis hospitalizations in children. Demographics of sex, age, race, insurance, and comorbidity. Outcome of death, length of stay (LOS in days), and total costs were described (with weighting) between neonatal (< 4 weeks) and pediatric cases.

Results. A total of 344 hospitalizations (58.1% male, median age 0 years [IQR 0–10 years]) occurred for endophthalmitis corresponding to a national total of 478 cases at an incidence rate of 7.2 cases per 100,000 persons. Of these, 50.3% were neonatal endophthalmitis cases. Endophthalmitis was most common in the Caucasian (51.1%), Hispanic (21.9%) and Black (16.6%) races. The overall mortality was not significantly different between pediatric and neonatal cases (OR 1.46, 95% CI 0.24–8.90). For LOS, neonatal patients with PN & Infusion lines had a significantly greater LOS by 14.30 days (95% CI 7.97–19.52, P <0.001) compared with pediatric patients. Neonatal cases also had a significantly greater associated cost compared with pediatric cases (difference $77,626, 95% CI $16,763–$138,500, P = 0.01).

Conclusion. Our population based study demonstrated that neonatal endophthalmitis was associated with similar incidence rates and mortality, but greater LOS and health care costs compared with pediatric endophthalmitis.

Disclosures. All authors: No reported disclosures.