Background. The epidemiology of Enterobacter cloacae bloodstream infections in children.

Methods. We performed a retrospective cohort study of children ≤19 years hospitalized in the critical care unit at the Children's National Medical Center in Washington, DC with E. cloacae bloodstream infections between 2007 and 2016. We excluded poly- ymcronal infections. We performed chart review to collect baseline characteristics, treatment regimens, and outcomes. Recurrence of infection was defined as new E. cloa cebaemia within 30 days of discontinuing antibiotics for initial infection.

Results. Twenty-six episodes of E. cloacae bacteraemia met inclusion criteria. Median age was 7 months (IQR 2-16 months), and 6/26 (23%) patients were African-American. All patients had at least one underlying chronic medical condition; the most common being neuromuscular (35%), end-stage renal disease (20%), oncologic (12%), and short bowel syndrome (15%). Central venous catheter was present in 18 (75%) patients and 10 (38%) had hemodynamic instability requiring vasopressor support at time of bacteraemia. Seven isolates (27%) were not susceptible to third-generation cephalosporins. Antibiotic treatment varied, with 7 (27%) receiving carbapenems empirically within 72 hours. Mean duration of bacteraemia was 2.9 days. Infection recurred within 30 days in 2 patients (8%) and 2 patients (8%) died within 30 days of the initial positive blood culture.

Conclusion. All episodes of E. cloacae bacteraemia occurring in children admitted to the ICU occurred in patients with underlying comorbid conditions, and more than half of affected children were infants <1 year. More than one-third of these infections were associated with severe sepsis and nearly one in ten infected patients died within one month.

Disclosure. All authors: No reported disclosures.

2428. Lower Rates of Antibiotic Treatment of Vancomycin-Resistant Compared With Vancomycin Susceptible Enterococcal Bacteriuria

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Background. Enterococcal bacteriuria occurs particularly among children given increasing antibiotic resistance and presence of inducible β-lactamases on some strains. The objective of this study was to describe the epidemiology and clinical outcomes for critically ill children with E. cloacae bloodstream infections.

Methods. We performed a retrospective cohort study of children ≤19 years hospitalized in the critical care unit at the Children's National Medical Center in Washington, DC with E. cloacae bloodstream infections between 2007 and 2016. We excluded poly- ymcronal infections. We performed chart review to collect baseline characteristics, treatment regimens, and outcomes. Recurrence of infection was defined as new E. cloa cebaemia within 30 days of discontinuing antibiotics for initial infection.

Results. Twenty-six episodes of E. cloacae bacteraemia met inclusion criteria. Median age was 7 months (IQR 2-16 months), and 6/26 (23%) patients were African-American. All patients had at least one underlying chronic medical condition; the most common being neuromuscular (35%), end-stage renal disease (20%), oncologic (12%), and short bowel syndrome (15%). Central venous catheter was present in 18 (75%) patients and 10 (38%) had hemodynamic instability requiring vasopressor support at time of bacteraemia. Seven isolates (27%) were not susceptible to third-generation cephalosporins. Antibiotic treatment varied, with 7 (27%) receiving carbapenems empirically within 72 hours. Mean duration of bacteraemia was 2.9 days. Infection recurred within 30 days in 2 patients (8%) and 2 patients (8%) died within 30 days of the initial positive blood culture.

Conclusion. All episodes of E. cloacae bacteraemia occurring in children admitted to the ICU occurred in patients with underlying comorbid conditions, and more than half of affected children were infants <1 year. More than one-third of these infections were associated with severe sepsis and nearly one in ten infected patients died within one month.

Disclosure. All authors: No reported disclosures.

2429. The Epidemiology and Outcomes of Enterobacter cloacae Bloodstream Infections in Children

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Session: 250. Treatment of AMR Infections Saturday, October 6, 2018: 12:30 PM

Background. Bloodstream infections cause significant morbidity and mortality in children admitted to intensive care units (ICUs). Enterobacter cloacae bloodstream infections can be particularly challenging due to treatment given increasing antibiotic resistance and presence of inducible β-lactamases on some strains. The objective of this study was to describe the epidemiology and clinical outcomes for critically ill children with E. cloacae bloodstream infections.

Methods. We performed a retrospective cohort study of children ≤19 years hospitalized in the critical care unit at the Children's National Medical Center in Washington, DC with E. cloacae bloodstream infections between 2007 and 2016. We excluded polymicrobial infections. We performed chart review to collect baseline characteristics, treatment regimens, and outcomes. Recurrence of infection was defined as new E cloacae bacteremia within 30 days of discontinuing antibiotics for initial infection.

Results. Twenty-six episodes of E. cloacae bacteraemia met inclusion criteria. Median age was 7 months (IQR 2-16 months), and 6/26 (23%) patients were African-American. All patients had at least one underlying chronic medical condition; the most common being neuromuscular (35%), end-stage renal disease (20%), oncologic (12%), and short bowel syndrome (15%). Central venous catheter was present in 18 (75%) patients and 10 (38%) had hemodynamic instability requiring vasopressor support at time of bacteraemia. Seven isolates (27%) were not susceptible to third-generation cephalosporins. Antibiotic treatment varied, with 7 (27%) receiving carbapenems empirically within 72 hours. Mean duration of bacteraemia was 2.9 days. Infection recurred within 30 days in 2 patients (8%) and 2 patients (8%) died within 30 days of the initial positive blood culture.

Conclusion. All episodes of E. cloacae bacteraemia occurring in children admitted to the ICU occurred in patients with underlying comorbid conditions, and more than half of affected children were infants <1 year. More than one-third of these infections were associated with severe sepsis and nearly one in ten infected patients died within one month.

Disclosure. All authors: No reported disclosures.

2430. Impact of USCAST Proposed Breakpoint Changes to Aminoglycosides, Cylcines, and Levofloxacin on Carbapenem-Resistant Enterobacteriaceae at a US Tertiary Referral Academic Medical Center

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Background. USCAST is one of many national committees that establish standards for testing and interpreting antimicrobial susceptibility. While working closely with EUCAST, USCAST has proposed updated breakpoints for the aminoglycosides, fluoroquinolones, and tigecycline and is discussing updated breakpoints for the tetracycline antimicrobials. A majority of US hospitals currently utilize FDA or CLSI breakpoints. This study sought to determine the impact of the proposed updated breakpoints on a population of carbapenem-resistant Enterobacteriaceae at a US tertiary referral academic medical center.

Methods. Carbapenem-resistant Enterobacteriaceae (n = 122) from January 2012 to January 2017 were identified as part of routine patient care for study inclusion. Amikacin, gentamicin, tobramycin, levofloxacin, minocycline and tigecycline were evaluated in duplicate on at least two separate occasions by broth microdilution according to CLSI guidelines. The most conservative minocycline breakpoint (5 mg/L) was discussed by USCAST working group for analysis. McNemar’s test determined significant susceptibility changes between USCAST and FDA/CLSI breakpoints for all CRE and for K. pneumoniae and Enterobacter spp.