1146. Lactococcus species Catheter-Related Bloodstream Infections in Pediatrics: A Case Series
Sarah E. Firmani, PharmD,1 Holly Maple, Pharm.D.2; Archana Balamohan, MD,2
1Arkansas Children’s Hospital/UAMS, Little Rock, Arkansas; 2University of Arkansas For Medical Sciences, College of Pharmacy, Little Rock, Arkansas; 3University of Arkansas For Medical Sciences/Arkansas Children’s Hospital, Little Rock, Arkansas

Session: P-64. Pediatric Bacterial Studies (natural history and therapeutic).

Background. Central venous catheters (CVC), may lead to central line-associated bloodstream infections (CLABSI). In the past, Lactococcus species have seldom been considered pathogenic. However, clinically significant infections have been reported, of which few are pediatric cases, all outside the United States.

Methods. We retrospectively identified pediatric patients with bacteremia secondary to Lactococcus spp. admitted to a tertiary pediatric hospital from January 1, 2018 - December 2020. We reviewed the PubMed database for cases of pediatric Lactococcus spp. infections in English, peer-reviewed literature.

Results. We identified 3 patients with Lactococcus spp. bacteremia. The average patient was 17 months old (range, 6–24 months). All had a CVC; two had short bowel syndrome and I had nephrotic syndrome. None received prophylaxis. Empiric treatment for all included ceftriaxone. All isolates were susceptible to penicillin. Duration of treatment was 10–14 days. Two of 3 patients had an underlying risk factor. Duration of therapy ranged from 7–40 days. Most definitive treatment regimens consisted of a third-generation cephalosporin (44%). Of bacteremia, 2/3 received vancomycin as part of their definitive therapy. Five of 9 reported quantitative antimicrobial sensitivity testing (AST) was performed. Two of 3 patients were de-escalated to ceftriaxone.

Conclusion. To the best of our knowledge, these are the first reported pediatric cases of Lactococcus infections in the United States and suggests Lactococcus spp. should be considered pathogenic in the appropriate circumstances. This series adds to the limited literature, including AST. Continued accrual of susceptibility data may raise the possibility of using a 3rd generation cephalosporin as empiric therapy for Lactococcus bacteremia.

Disclosures. All Authors: No reported disclosures

1147. Sentinel Surveillance of Bacterial Pneumonia in Children Under 5 years Treated in HOMI - Fundación Hospital pediátrico la Misericordia in Bogotá, Colombia 2016-2020
German Camacho Moreno, n/a; Carolina Duarte Valderrama, n/a; Jacqueline Palacios, n/a; Luz Angela Calvo, n/a; Ivy Talavera, n/a; Jaime Moreno Castañeda, n/a; Luz Yanet Maldonado Cortes, n/a; Daniela Jerez, n/a; Carolina Garcia Romero, n/a; Karen Jimenez Rodriguez, n/a; Olga Sanabria, n/a; Yenny Marcela Elizalde Rodriguez, n/a; Leidy Monroy, n/a; Maria Cristina Duarte, n/a; Universidad Nacional de Colombia - Fundacion HOMI - Hospital Infantil Universitario San José, Bogotá, Distrito Capital de Bogotá, Colombia; 2Instituto Nacional de Salud, Bogotá, Distrito Capital de Bogotá, Colombia; 3Ministerio de Salud, Bogotá, Distrito Capital de Bogotá, Colombia; 4Secretaria de Salud de Bogotá, Bogotá, Distrito Capital de Bogotá, Colombia; 5Organización Panamericana de la Salud, Bogotá, Distrito Capital de Bogotá, Colombia; 6HOMI, Fundación Hospital pediátrico la Misericordia, Bogotá, Distrito Capital de Bogotá, Colombia; 7HOMI, Fundación Hospital pediatrico de la Misericordia, Bogotá, Distrito Capital de Bogotá, Colombia

Session: P-64. Pediatric Bacterial Studies (natural history and therapeutic).

Background. Pneumonia is one of the leading causes of hospitalization and death in children under 5y. The main causes of bacterial pneumonia (BP) are Streptococcus pneumoniae (Spn) and Haemophilus influenzae (Hi). Colombia implemented the Hib vaccine in 1997 with a 3 + 0 scheme and the PCV10 vaccine in 2012, using a 2 + 1 scheme. Sentinel surveillance of BP is carried out at HOMI - Fundación Hospital Pediatría La Misericordia, which is part of the invasive bacterial vaccine preventable disease surveillance network.

Methods. A daily active search for cases that met the definitions established in the protocol of the Pan American Health Organization was carried out. All hospitalized patients under 5 years of age with a diagnosis of community acquired pneumonia (ICD10 J10 to J22) were classified as suspected cases, while all suspected cases in which chest X-ray showed a radiological pattern compatible with bacterial pneumonia were considered a probable case. Blood cultures were taken from probable cases and results were positive (Spn, Hi), the samples were sent to the national and district reference laboratories for confirmation and serotyping. The data obtained in the period January 2016 to December 2020 were analyzed.

Results. A total of 1291 cases of suspected bacterial pneumonia were confirmed, of which 60% were < 2 y. The highest incidence occurred from March to June (Figure 1). Blood cultures were performed in 2223 (92%) of the 2432 (46.1%) probable cases, confirming 127 (5.2%) cases. Spn, Hi, and other bacteria were found in 55, 27, and 28 cases, respectively (Table 1). Blood cultures were taken from probable cases and results were positive (Spn, Hi), the samples were sent to the district and national reference laboratories for confirmation and serotyping. The data obtained in the period January 2016 to December 2020 were analyzed.

Results. 5272 suspected cases of bacterial pneumonia were found, of which 60% were < 2 y. The highest incidence occurred from March to June (Figure 1). Blood cultures were performed in 2223 (92%) of the 2432 (46.1%) probable cases, confirming 127 (5.2%) cases. Spn, Hi, and other bacteria were found in 55, 27, and 28 cases, respectively (Table 1). Blood cultures were taken from probable cases and results were positive (Spn, Hi), the samples were sent to the district and national reference laboratories for confirmation and serotyping. The data obtained in the period January 2016 to December 2020 were analyzed.

Table 1. Bacterial pneumonia isolates. HOMI. 2016 - 2020

| Organism          | 2016 | 2017 | 2018 | 2019 | 2020 |
|-------------------|------|------|------|------|------|
| Streptococcus pneumoniae | 1   | 2    | 2    | 3    | 1    |
| Haemophilus influenzae | 8   | 1    | 2    | 10   | 1    |
| Mannheimella sp      | 0   | 0    | 0    | 0    | 0    |
| Enterococcus spp     | 0   | 0    | 0    | 0    | 0    |
| Lactococcus spp      | 0   | 0    | 0    | 0    | 0    |
| S. aureus            | 0   | 0    | 0    | 0    | 0    |
| Other bacilli        | 0   | 0    | 0    | 0    | 0    |

Conclusion. BP mainly occurs in 2-year-old children. Spn 19A is the most common bacteria. Although the most frequent Hi is non-typeable, cases of HiB are still observed. Sentinel surveillance allows measuring the impact of public health interventions on this disease.

Disclosures. German Camacho Moreno, n/a, Pfizer and MSD (Research Grant or Support, Speaker’s Bureau, Other Financial or Material Support, Has received support from Pfizer for participation in congresses)

1148. Duration of Antibiotic Therapy in the Treatment of Bacterial Meningitis in Young Infants: A Systematic Review and Narrative Synthesis
Maite Van Hentenryck, MD, MS; Alan Schroeder, MD; Russell McCollough, M.D.; 2Christopher D. Stave, MLS; Marie E. Wang, MD, MPH; 3Stanford University School of Medicine, Palo Alto, California; 4University of Nebraska Medical Center, Omaha, Nebraska; 5Lane Medical Library, Stanford University School of Medicine, Palo Alto, California

Session: P-64. Pediatric Bacterial Studies (natural history and therapeutic).

Background. IDSA recommendations of 14-21 days of parenteral therapy for bacterial meningitis are based predominantly on expert consensus. Parenteral durations consistent with these recommendations are sometimes provided even when meningitis is suspected but not confirmed. We aimed to systematically review the literature on duration of parenteral antibiotic therapy and outcomes in bacterial meningitis in infants < 3 months of age.

Methods. We searched PubMed, Embase, and the Cochrane Central Register of Controlled Trials for publications up until May 11, 2021. Eligible studies were published in English and included infants < 3 months of age with bacterial meningitis for which route and duration of antibiotic therapy and outcomes were reported. We excluded case reports and infants with birth weight < 1500g, major congenital malformations, or for BP was 9/1000 children < 5 years, and 43 patients died. Case fatality rate was 1.7% among probable cases.

Graph 1. Trend of suspected bacterial pneumonia cases in children under 5 years old. HOMI. 2016-2020

Graph 2. Bacterial pneumonia serotypes. HOMI, January 2016 - December 2020
neurosurgical conditions. We assessed bias using published tools specific to study type. A meta-analysis was not conducted due to insufficient data on outcomes by duration of therapy: PROSPERO registration: CRD42020201667.

Results. A total of 2195 studies were identified; 280 were selected for full text review and 32 were included for narrative synthesis. There was 1 randomized-controlled trial (RCT), 25 cohort studies, and 6 case series. The RCT found no difference in treatment failure rates between 10 and 14 days of therapy, but only included 2 cerebrospinal fluid (CSF) culture-positive cases. A single cohort study including only CSF culture-negative cases presented outcomes by duration of therapy and concluded that courses >21 days had no impact on prognosis. Twenty-one studies had data on duration of therapy and outcomes by patient, most with small samples (median 4 patients). No conclusions on efficacy of shortened antibiotic courses could be drawn due to small sample sizes and lack of stratification of outcomes by short versus long courses.

Conclusion. Data on parenteral treatment duration in bacterial meningitis in infants <3 months are primarily observational, and larger studies rarely report outcomes by duration of therapy. Given the associated risks and costs of prolonged parenteral therapy, there is a pressing need for comparative effectiveness research to determine the optimal parenteral treatment duration.

Disclosures. All Authors: No reported disclosures

1149. Application of a Multiplex Polymerase Chain Reaction Test for Diagnosing Bacterial Enteritis in Children in a Real-Life Clinical Setting
Hyon Woo Lee, MD; Seung Beom Han, MD; Jung Woo Rim, MD, PhD; 1Daegu St. Mary's Hospital, Daejeon, Taegon-jikhalsi, Republic of Korea; 2College of Medicine, The Catholic University of Korea, Daejeon, Taegon-jikhalsi, Republic of Korea
Session: P-64. Pediatric Bacterial Studies (natural history and therapeutic)

Background. Although a bacterial multiplex polymerase chain reaction (mPCR) test should be performed selectively in patients with gastrointestinal symptoms consistent with bacterial enteritis, its usefulness has been evaluated upon stool samples as requested by clinicians, without considering the patients’ gastrointestinal symptoms or clinical diagnoses. This study aimed to determine the sensitivity of bacterial mPCR testing and to interpret the mPCR test results considering patients’ clinical symptoms and diagnoses.

Methods. Medical records of 710 pediatric patients for whom a bacterial mPCR test was performed were retrospectively reviewed. Clinicopathological characteristics and mPCR test results were compared between patients with positive mPCR test results (n = 199) and those with negative mPCR test results (n = 511) and between patients in whom inflammatory pathogens (Campylobacter spp. and Salmonella spp.) were identified (n = 95) and those in whom toxigenic pathogens (Clostridium spp.) were identified (n = 70).

Results. A positive mPCR test result was significantly associated with an older age (p < 0.001), diagnosis of acute gastroenteritis (p = 0.021), presence of hematochezia (p < 0.001), and absence of cough (p = 0.044). The diagnosis of acute gastroenteritis (p = 0.003), presence of fever (p = 0.027) and diarrhea (p = 0.043), and a higher C-reactive protein level (p = 0.025) were significantly associated with the identification of inflammatory pathogens rather than toxigenic pathogens in patients with positive mPCR test results.

Conclusion. Bacterial mPCR testing should be performed selectively based on patients’ clinical symptoms and diagnoses, and its results should be interpreted with considering identified pathogens.

Disclosures. All Authors: No reported disclosures

1150. Pediatric Osteoarticular Infections Caused by Mycobacteria Tuberculosis Complex: A Twenty-Six Year Review of Cases in San Diego, California
Ian Drobiash, MD; Nanda Ramchandar, MD, MPH; Vanessa Raae, MD, MSc; Alice Pong, MD; John S. Bradley, MD; Christopher R. Cannavino, MD; 1University of California, San Diego, San Diego, California; 2University of California San Diego, La Jolla, California; 3NYU Grossman School of Medicine, New York, New York;
4University of California San Diego/Rady Children’s Hospital, San Diego, California; 5University of California at San Diego, San Diego, California

Session: P-64. Pediatric Bacterial Studies (natural history and therapeutic)

Background. Osteoarticular infections (OAI) account for 10-20% of extrapulmonary Mycobacterium tuberculosis (MTB) complex infections in children. Given the rarity of MTB OAI, the epidemiology, disease manifestations, and treatment are poorly characterized. We describe 21 children treated for MTB complex OAI over a 26-year period at a tertiary pediatric center in southern California.

Methods. We conducted a retrospective review of children diagnosed with MTB complex OAI and cared for between 31 Dec 1992 to 31 Dec 2018 at a single tertiary care pediatric hospital with close proximity to the United States-Mexico border.

Results. We identified 21 children with MTB complex OAI during the study period (Table 1). Concurrent pulmonary disease (44.8%), meningitis (9.5%), and intra-abdominal involvement (14.3%) were all observed. MTB complex was identified by culture (14 cases), and the remaining cases were positive for Mycobacterium bovis. Of the eight cases of vertebral OAI (the most common site), one was culture-positive for M. bovis. Open bone biopsy was the most common procedure for procurement of a tissue sample and had the highest culture yield (Table 2). The median duration of antimicrobial therapy was 52 weeks (IQR 52-58), Successful completion of therapy was documented in 15 children (71.4%). Seven children (33.3%) experienced long term sequelae related to their infection.

Table 1. Twenty-one children with Mycobacteria tuberculosis complex osteoarticular infections

| Sample Type          | Culture positive (%) |
|----------------------|----------------------|
| Incision and drainage of abscess | 4/6 (66.7) |
| Pelvis               | 1/1 (100)            |
| Retroauricular       | 0/1 (0)              |
| Sacrum               | 1/1 (100)            |
| Psosas               | 2/2 (100)            |
| Forearm              | 0/1 (0)              |
| Joint aspirate       | 3/5 (60)             |
| Elbow                | 1/1 (100)            |
| Hip                  | 2/3 (66.7)           |
| Knee                 | 0/1 (0)              |
| Synovial Biopsy      | 2/6 (33.3)           |
| Knee                 | 0/1 (0)              |
| Hip                  | 2/4 (50)             |
| Elbow                | 0/1 (0)              |
| Bone aspirate        | 1/2 (50)             |
| Femur                | 1/2 (50)             |
| Bone biopsy (CT-guided) | 1/3 (33.3) |
| Vertebral            | 1/3 (33.3)           |
| Bone biopsy (open)   | 8/8 (100)            |
| Olecranon            | 2/2 (100)            |
| Femur                | 1/1 (100)            |
| Hip                  | 2/2 (100)            |
| Vertebra             | 2/2 (100)            |
| Sacrum               | 1/1 (100)            |
| Total                | 19/30 (63.3)         |

Conclusion. Among the 21 children with MTB complex OAI assessed, 8 of 15 (53.3%) children with a positive tissue culture had M. bovis (intrinsically resistant to