

1146. Lactococcus species Catheter-Related Bloodstream Infections in Pediatrics: A Case Series

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

Background. Central venous catheters (CVC), may lead to central line-associated blood stream infections (CLABSIs). 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 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 1 had nephrotic syndrome. None received probiotics. Empiric treatment for all included vancomycin. Two of 3 patients were de-escalated to ceftriaxone. All isolates were susceptible to penicillin. Duration of treatment was 10-14 days. Two of 3 were managed with CVC retention and none had recurrence of infection.

A literature review revealed 9 additional cases (Table 1). The most common source of infection was blood (33%), with 66% (2/3) occurring in patients with central lines. Other sources included liver abscess (11%), brain abscess (11%), cerebrospinal fluid (11%), urine (11%), and endocarditis (22%). Median patient age was 12 months (range, 14 days-14 years). Five of 9 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) or interpretation of AST to beta-lactam antibiotics; 80% (4/5) were susceptible.

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.

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1147. Sentinel Surveillance of Bacterial Pneumonia in Children Under 5 years Treated in HOMI - Fundación Hospital pediátrico la Misericordia in Bogotá, Colombia 2016-2020.

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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 Pediátrico 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; if 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). Serotyping was performed in 85.4% of the Spn isolates and 77.7% of Hi isolates. The most frequent Spn serotypes were Spn19A in 19 cases (40.4%), Spn3 in 12 cases (25.5%), and Spn14 in 4 cases (8.5%). The presence of Spn19A has increased over time (Figure 2). The most frequent Hi was non-typeable in 13 patients (61.9%), followed by serotype b 6 (28.5%) and serotype a 2 (9.5%). The rate of hospitalization

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

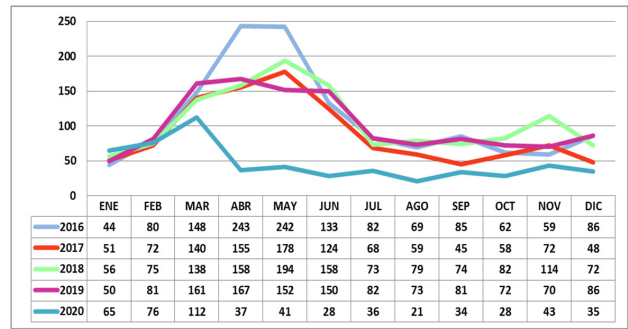
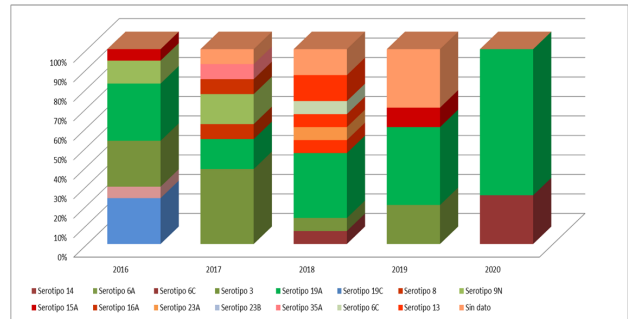


Table 1. Bacterial pneumonia isolates. HOMI. 2016 - 2020

Bacteria	2016		2017		2018		2019		2020	
	n	%	n	%	n	%	n	%	n	%
<i>Streptococcus pneumoniae</i>	17	2.7	13	2.3	12	3.57	9	2.4	4	3.4
<i>Haemophilus influenzae</i>	8	1.2	2	0.36	11	3.3	6	1.5	0	0
<i>Neisseria meningitidis</i>	1	0.16	0	0	0	0	0	0	0	0
<i>Staphylococcus aureus</i>	4	0.64	5	0.9	2	0.6	3	1	1	0.9
<i>Salmonella</i>	0	0	3	0.54	0	0	0	0	0	0
<i>Klebsiella pneumoniae</i>	0	0	1	0.18	0	0	2	1	0	0
<i>Klebsiella oxytoca</i>	0	0	1	0.18	1	0.3	0	0	0	0
Otros	11	1.7	1	0.18	1	0.3	1	0.4	1	0.9
Contaminados	56	9.04	48	8.64	40	11.9	44	10.6	15	12.8
Negativos	522	84.32	481	86.7	273	81.3	348	84	96	82.1
Total	619	100	555	100	336	100	414	100	117	100

Graph 2. Bacterial pneumonia serotypes. HOMI. January 2016 - December 2020



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.

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1148. Duration of Antibiotic Therapy in the Treatment of Bacterial Meningitis in Young Infants: A Systematic Review and Narrative Synthesis

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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