

	N (%)			p-value
	Total (N=36)	Single set + (N=24)	≥2 set + (N=12)	
SIRS ^a criteria	26 (72)	20 (83)	6 (50)	0.05
Souvenir criteria	31 (86)	20 (83)	11 (92)	0.65
Clinical criteria	12 (33)	7 (29)	5 (42)	0.48
Infection on imaging	8 (22)	6 (25)	2 (17)	0.69
2 nd culture site positive	6 (17)	2 (8)	4 (33)	0.15
Intervention applied ^b	28 (78)	17 (71)	11 (92)	0.22

P values were calculated using the Fisher Exact Test for categorical variables
^a Systemic inflammatory response syndrome
^b Antimicrobial therapy and/or central line removal

	N (%)			p-value
	Total (N=36)	Single set + (N=24)	≥2 set + (N=12)	
Antimicrobial Therapy	26 (72)	17 (71)	10 (83)	0.67
Duration of therapy >2 weeks	11 (31)	4	7	0.02
LOS ¹ (days) (mean/IQR ²)	11 days (6.5)	13 days (8.3)	6 days (3.8)	0.29
Disposition				
Discharged from hospital	33 (92)	21 (88)	12 (100)	0.54
In hospital mortality	3 (8)	3 (13)	0	0.54

¹ Length of stay
² Interquartile range

Conclusion: SLB was rare and occurred more frequently as a single set of positive blood cultures. Though limited by sample size, this study found similar patient characteristics, clinical significance and outcomes between patients with one set and those with ≥2 sets of blood cultures positive for *S. lugdunensis*. Given the potential severity of SLB, it seems prudent to treat *S. lugdunensis* in a single blood culture, but larger studies are needed.

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299. Paediatric Collaborative Network on Infections in Canada (PICNIC) Study of the Current Landscape of Gram Negative Bacteremias

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Background: Antimicrobial resistance is a public health threat, invasive infection from multi-drug resistant gram-negative (MDRGN) pathogens is associated with significant morbidity and mortality. The incidence of MDRGN bacteremia in Canada is rising, and pediatric data is limited.

Methods: This retrospective chart review of paediatric patients with gram negative bacteremia in a multicenter PICNIC database (n=7 centers) from 2013 to 2017. MDRGN was defined as *enterobacteriaceae* that were resistant to third generation cephalosporins (including ESBL, CPE). Ethics approval was obtained at all sites, and data was entered into a secure REDCAP database, descriptive statistics are described herein.

Results: Of the 676 bacteremia patients in the database, 214 (31.7%) were gram negative pathogens. *E. coli* was the most frequent pathogen (59.8%, of which 22 of 128 were MDR), followed by *Klebsiella* (31.8%, of which 9 of 68 were MDR). Of the 31 MDRGNs, 19 were ESBL, 1 was a CPE, and 11 were nonspecific mechanisms of resistance. There were no multidrug resistant *Pseudomonas*, *Stenotrophomonas*, or *Acinetobacter*. The majority of patient were less than 3 months of age (59.3%) and were male (58.8%). The majority had an underlying comorbid condition; hematologic diagnosis accounting for 14.5%. Length of stay varied from 1 to 742 days (mean 72, standard deviation 88). 11% required admission to ICU, 10% required removal of an intravascular catheter, 7% required a change in ventilation status, 2% requiring procedural source control, and there was an 8% mortality rate. Treatment duration greater than 14 days occurred in 123 patients (61% of patients).

Table 1. Demographic and clinical data of cases.

	Number (%)
Total number of patients	214
Gender	
Male	126 (58.9)
Female	88 (41.1)
Median age	
Age group	
<12 months	147 (68.7)
>12 months	66 (30.8)
0-28 days	89 (41.6)
29 days to 3 months	38 (17.8)
3 months to 2 years	39 (18.2)
3 to 5 years	12 (5.6)
>5 years	35 (16.4)
Missing data	1 (0.5)
Underlying disease	
Hematology/oncology	31 (14.5)
Other	118 (55.1)
None	70 (33.7)
Total number of hospital days	10791
Mean length of stay	52
Standard deviation of length of stay	88
Range of length of stay	1 to 742
Community vs nosocomial onset	
Community onset	118 (57.3)
Hospital acquired*	88 (42.7)
(8 cases with missing data)	
Antibiotic Treatment Duration	
Antibiotic treatment >14 days	123 (61.2)
(13 cases with missing data)	

*Hospital acquired: first positive blood culture occurred after 72 hours into admission

Table 2. Isolated species and patterns of resistance.

Pathogen	Total Number (% of total cases, n=214)	MDR* (% of total of each species)	ESBL** (% of total of each species)	Carbapenem Resistance (% of total of each species)
<i>Escherichia coli</i>	128 (59.8)	22 (17.1, n=128)	12 (9.4, n=128)	1 (0.8)
<i>Klebsiella pneumoniae</i>	49 (22.9)	7 (14.3, n=49)	5 (10.2, n=49)	/
<i>Klebsiella oxytoca</i>	19 (8.9)	2 (10.5, n=19)	2 (10.5, n=19)	/
<i>Raoultella sp.</i>	3 (1.4)	/	/	/
Not specified	17 (7.9)	/	/	/

*Multidrug resistance (MDR) defined as having one of the following characteristics: ceftriaxone-resistant *Enterobacteriaceae* (indicative of ESBL producer); carbapenem-resistant *Enterobacteriaceae* (indicative of carbapenemase producer); *Enterobacteriaceae* resistant to at least 2 of fluoroquinolones, aminoglycosides or trimethoprim.

**Extended-spectrum beta-lactamase (ESBL) defined as ceftriaxone-resistant *Enterobacteriaceae*.

Table 3. Complications in treatment due to infection.

Characteristics	Number (% of total cases, n=214) (% of complex, n=165)
ICU admission due to infection	24 (11.2) (14.5)
Removal of intravascular catheter due to infection	22 (10.3) (13.3)
Change in ventilation requirements due to infection	15 (7.0) (9.1)
Infectious complication requiring surgical drainage	4 (1.9) (2.4)
Death	18 (8.4) (11.1)
Other complications due to infection	31 (14.5) (18.8)

Conclusion: This preliminary analysis of a multicenter review of pediatric gram negative bacteremias demonstrates a higher risk in neonates with comorbid conditions. A surprisingly prolonged treatment duration of greater than 14 days occurred in the majority of patients. Further analysis to assess factors associated with prolonged treatment durations, MDR infection, and complications is required. Gram negative bacteremia remains a significant cause of morbidity and mortality in pediatric patients.

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300. Pediatric Center Evaluation of the BioFire® Blood Culture Identification 2 Panel Versus the Original BioFire® FilmArray® Blood Culture Identification Panel for the Detection of Microorganisms and Resistance Markers in Positive Blood Cultures

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