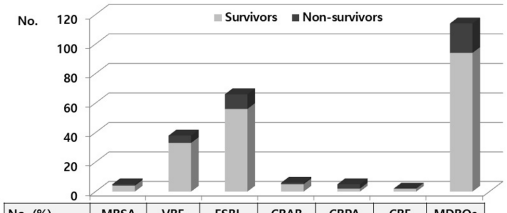
spp. (23.9%), *Klebsiella* spp. (16.3%), and *Streptococcus* spp. (11.8%). The MDROs represented 15.8% of the total of isolated micro-organisms (figure). In the multivariable logistic regression analysis, isolation of MDROs (odds ratio [OR], 3.72; 95% confidence interval [CI], 1.53–9.04), hypoalbuminemia (OR, 5.56; 95% CI, 1.25–24.75), immunosuppressant (OR, 6.29; 95% CI, 1.96–20.18), and underlying renal diseases (OR, 4.29; 95% CI, 1.66–11.11) were found as independent risk factors for 28-day mortality.

Conclusion. In conclusion, our study indicates that MDROs are widespread in the patients with intra-abdominal infections. Furthermore, the isolation of MDROs was associated with poor clinical outcomes. For the appropriate selection of empirical antibiotics, local epidemiology of causative microorganisms and patterns of antimicrobial resistance should be continuously monitored.



No. (%)	MRSA	VRE	ESBL	CRAB	CRPA	CRE	MDROs
Survivors	4 (89.3)	33 (86.8)	56 (84.8)	5 (83.3)	2 (40.0)	2 (100)	94 (82.5)
Non-survivors	1 (10.7)	5 (13.2)	10 (15.2)	1 (16.7)	3 (60.0)	0 (0)	20 (17.5)
Total (n)	5	38	66	6	5	2	114

Disclosures. **All authors:** No reported disclosures.

1500. Gastric Carcinoma Survival Related with *Helicobacter pylori* Infection in Cali, Colombia: A Hospital-Based Cancer Study

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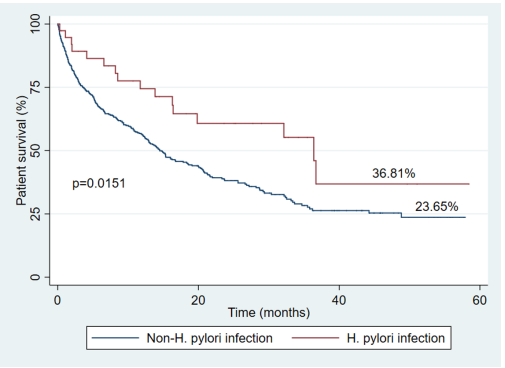
Background. Gastric carcinoma (GC) has been associated with the presence of *Helicobacter pylori* infection. The infection rates vary according to geographic region and the majority of infected persons remain asymptomatic. Recent studies have suggested a controversial role of *H. pylori* infection in GC prognosis. The GC incidence rate in Colombia is among the highest of all Latin-American countries at 18.5 per 100,000 people. Furthermore, GC is responsible for the highest mortality rate among all malignancies in the country. This study aimed to describe GC survival in patients with *H. pylori* infection.

Methods. Hospital registries for all patients diagnosed with GC between 2000 and 2015 were consulted for clinical data. The hospital-based cancer registry was cross-linked with a population-based cancer registry to obtain IARC/WHO ICD-O-3 classification and follow-up information on all patients. Survival analysis was estimated using the Kaplan–Meier method. Differences between *H. pylori* cases and non-*H. pylori* cases were assessed through Pearson chi-2, Fisher exact test, log-rank test, and Cox regression.

Results. A total of 500 GC cases were included and 8.6% had *H. pylori* infection. In the *H. pylori* cases, the median age was 62 years (IQR = 52–71), 56% were men. All cases had a tumor size >5 mm, Lauren classification was 60% intestinal type and 40% diffuse type. Regarding clinical stage, 33% of the patients were classified as localized (TNM AJCC 7th edition: IA, IB, IIA), 35% as regional (IIB, IIIA, IIIB, IIIC) and 12% were distant (IV). There was a statistically significant difference between *H. pylori* cases and non-*H. pylori* cases survival ($P = 0.0151$). In univariate analysis, *H. pylori* infection was associated with better cancer-specific survival [HR = 0.5398; 95% CI: 0.3255–0.8950; $P = 0.017$]. In multivariate analysis, *H. pylori* infection [HR = 0.5934; 95% CI: 0.3577–0.9843; $P = 0.043$] and clinical stage [HR = 1.5327; 95% CI: 1.3672–1.7182; $P < 0.001$] were independent prognostic factors for cancer-specific.

Conclusion. This study showed that *H. pylori* infection is a beneficial prognostic indicator in patients with GC Cases, and GC survival in cases with *H. pylori* infection was better compared with non-*H. pylori* cases.



Disclosures. **All authors:** No reported disclosures.

1501. Risk Factors for *Clostridium difficile* Infection in Patients Hospitalized with Community-Acquired Pneumonia

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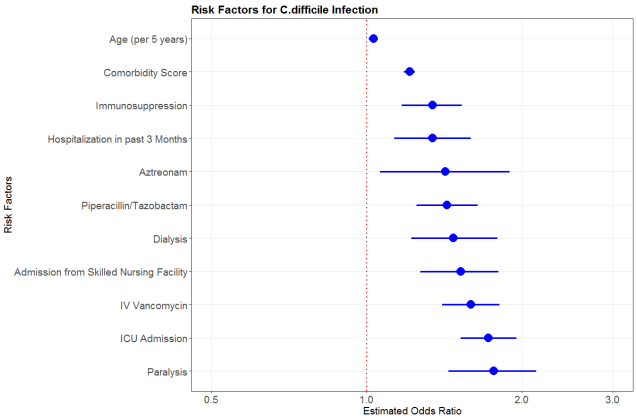
Background. Patients with community-acquired pneumonia (CAP) are often prescribed broad-spectrum antibiotics, putting them at risk for developing *Clostridium difficile* infection (CDI). Previous studies of risk factors for CDI in this population have suffered from small sample sizes. We examined the risk factors for CDI in patients hospitalized with CAP using a large US database.

Methods. We included adult patients admitted with CAP 2010–2015 to 175 US hospitals participating in Premier and providing administrative and microbiological data. Patients were identified as having CAP if they had a diagnosis of pneumonia, a chest radiograph, and were treated with antimicrobials on day 1 and for ≥3 days. Incident CDI was identified with ICD-9 diagnosis code (not present on admission) and a positive laboratory test. We used descriptive statistics and mixed multiple logistic regression modeling to mutually adjust and evaluate risk factors previously suggested in the CDI literature.

Results. Among 148,417 inpatients with pneumonia treated with antibiotics, 789 (0.53%) developed CDI. The median age was 75 years, and 53% were female. Compared with patients with no CDI, those with CDI were older (75 vs. 72 years), had more comorbidities (5 vs. 3), and were more likely to be admitted from SNF (15.7% vs. 7.3%) or hospitalized in the past 3 months (11.8% vs. 7.1) (all comparisons $P < 0.001$). After multivariable adjustment, factors significantly associated with development of CDI included increasing age, admission from a skilled nursing facility, and receipt of piperacillin/tazobactam, aztreonam or intravenous vancomycin (Figure 1). Receipt of third-generation cephalosporins or fluoroquinolones was not an independent predictor of CDI.

Conclusion. In a large US inpatient sample hospitalized for pneumonia and treated with antimicrobials, only 0.53% of the patients developed CDI as defined by an ICD-9 code and positive laboratory test. Reducing the exposure to healthcare facilities and certain high-risk antibiotics may reduce the burden of CDI in patients with CAP.



Disclosures. **All authors:** No reported disclosures.

1502. Risk Factors Associated to *Aeromonas* spp. Infection and Outcome at a Third-level Care Hospital in Mexico

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Background. Information regarding infections caused by *Aeromonas spp.* is limited. The aim of this study was to describe the clinical and epidemiologic characteristics of infections by *Aeromonas spp.* during a 7-year period at a tertiary care hospital in Mexico.

Methods. We analyzed a retrospective cohort of adults with *Aeromonas spp.* clinical isolates, between January 1, 2010 and August 31, 2017 from the Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán. We analyzed demographic, clinical, microbial characteristics and antimicrobial susceptibility test. Risk factors for bacteremia and mortality were identified with logistic regression; adjustment for possible

confounder factors was carried out. Data were analyzed with IBM SPSS Statistics version 21. Statistical significance was defined as the value for $P < 0.05$.

Results. We identified 387 patients with an infection by *Aeromonas* spp.; the median age was 55 years and 52% were women. 94 (24.3%) patients had an autoimmune disease; 74 (19.1%) had a solid tumor (ST); 51 (13.2%) had chronic kidney disease (CKD); 43 (11.1%) had chronic liver disease (CLD); 37 (9.6%) had a hematologic malignancy (HM); 23 (5.9%) were solid-organ recipients and 20 (5.2%) HIV infected. 41.6% ($n = 161$) of the infections were healthcare related. Stools were the most frequent isolation site ($n = 299$, 77%), followed by blood cultures ($n = 29$, 7.4%) and abscess ($n = 19$, 4.9%). The most common species was *A. veronii*. Aminoglycosides, quinolones, carbapenems, and trimethoprim/sulfamethoxazole were the most active antibiotics in vitro. The variables associated with bacteremia were CLD OR 5.647; diabetes OR 2.376 and nosocomial acquisition OR 4.08. 30-day mortality was 5.7%, while global mortality was 10.3%. Mortality was associated with sex (male) OR 1.753; HM OR 2.741; ST OR 2.576; polymicrobial infection OR 2.445; ICU admission OR 5.175 and bacteremia OR 3.881.

Conclusion. Infections by *Aeromonas* spp. have increased and have a greater incidence among individuals with chronic diseases and immunosuppressive states in this setting. Mortality described in this cohort was minor than previously stated by other series.

Basal characteristics		N=387 Cases of *Aeromonas spp* infections (n, %)
Age (median)		55 (17-96)
Female		203 (52.5)
Comorbidities		
	Hematologic Malignancy	37 (9.6)
	Solid tumor	74 (19.1)
	Viral hepatitis	14 (3.6)
	Autoimmune disease	94(24.3)
	Hematopoietic stem cell transplantation	4 (1.0)
	Solid organ transplantation	23 (5.9)
	HIV infection	20(5.2)
	Diabetes mellitus	94(24.3)
	Chronic liver disease	43(11.1)
	COPD	6(1.6)
	Chronic kidney disease	51(13.2)
Immunosuppressive therapy		153 (39.5)
Polymicrobial infection		105 (27.1)
Nosocomial infection		161(41.6)
ICU		31 (8.0)
Surgery		86(22.2)
Antibiotic		146(37.7)
Quinolones		
Carbapenem		76(19.6)
Cephalosporin		59(15.2)
Piperaciline-tazobactam		21(5.4)
TMP/SMX		14(3.6)
Aminoglycoside		3(0.8)
30-day mortality		22(5.7)
Global mortality		40 (10.3)

Table 1. Demographic and clinical characteristics of patients with Aeromonas *spp* infection.

Antibiotic	No.	Susceptible n (%)	Intermediate n (%)	Resistant n (%)	MIC Susceptible	MIC Intermediate	MIC Resistant
Amikacine	98	96(97.95)	1(1.02)	1(1.02)	≤16	32	≥64
Gentamicine	74	72(97.29)	1(1.35)	1(1.35)	≤4	8	≥16
Aminoglycoside	**172**	**168(97.67)**	**2(1.16)**	**2(1.16)**			
Ciprofloxacin	363	350(96.41)	5(1.37)	8(2.20)	≤1	2	≥4
Levofloxacin	11	10(90.90)	0	1(9.09)	≤2	4	≥8
Quinolone	**374**	**360(96.25)**	**5(1.33)**	**9(2.40)**			
Piperaciline Tazobactam	71	58(81.69)	1(1.40)	12(16.90)	≤16	32-64	≥128
Ampiciline	363	4(1.10)	4(1.10)	355(97.79)			
Ampiciline Sulbactam	12	1(8.33)	1(8.33)	10(83.33)			
Amoxiciline Clavulanic acid	83	38(45.70)	37(44.57)	8(9.63)			
Cefoxitin	54	31(57.40)	4(7.40)	19(35.18)			
Beta lactam							
Cefazoline	135	46(34.07)	10(7.40)	79(58.51)			
Ceftriaxone	87	79(90.80)	2(2.29)	6(6.89)	≤8	16-32	≥64
Ceftazidime	86	80(93.02)	0	6(6.98)	≤8	16	≥32
Cefepime	44	42(95.45)	1(2.27)	1(2.27)	≤8	16	≥32
Cephalosporin	**352**	**247(70.17)**	**13(3.69)**	**92(26.13)**			
Imipenem	82	69(84.14)	8(9.75)	5(6.09)	≤4	8	≥16
Meropenem	77	74(96.10)	1(1.29)	2(2.59)	≤4	8	≥16
Ertapenem	10	9(90)	0	1(10)			
Carbapenem	**169**	**152(89.94)**	**9(5.32)**	**8(4.73)**			
TMP-SMX	363	304(83.74)	0	59(16.25%)	≤2/38	-	≥4/76
Nitrofurantoine	91	91(100)	0	0			

Table 2. *Antibiotic susceptibility pattern.*

Disclosures. **All authors:** No reported disclosures.

1503. Engraftment of Investigational Microbiome Drug, SER-262, in Subjects Receiving Vancomycin Is Associated with Reduced Rates of Recurrence after Primary *Clostridium Difficile* Infection (CDI)

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Background. CDI is a 2-hit process requiring *C. difficile* spores and antibiotic-mediated dysbiosis, a low diversity state of the gut microbiome. Recurrent CDI (rCDI) is common and may be related to inadequate antibiotic concentrations (e.g., metronidazole; MET) or persistent dysbiosis (e.g., vancomycin; VAN). SER-262 is an oral investigational microbiome drug rationally designed to reduce rCDI by restoring colonization resistance.

Methods. SERES-262-001 was a Phase 1b randomized placebo (PBO)-controlled single and multidose study. Subjects with primary CDI ($n = 96$) were enrolled in 8 cohorts (SER-262: PBO, 5:1). Subjects were dosed after MET ($n = 57$) or VAN ($n = 39$) per investigator discretion. Engraftment of SER-262 strains was evaluated using strain-specific molecular probes in fecal samples; microbial diversity was measured via whole metagenomic shotgun sequencing. Endpoints included safety and rCDI rates up to 8 weeks posttreatment and strain engraftment at 1, 4, 8, 12, and 24 weeks.

Results. SER-262 safety was comparable to PBO. Although overall rCDI rates were similar in SER-262 ($n = 80$) and PBO ($n = 16$) subjects (18.8% vs. 12.5%, respectively), in a *post-hoc* analysis we observed reduced rates of rCDI in the VAN+SER-262 arm compared with MET+SER-262 (6.3 vs. 27.1%, respectively, P = 0.02, Figure 1). Overall, 8 of 12 SER-262 strains showed significant engraftment relative to PBO. However, greater SER-262 strain engraftment was observed in VAN-treated subjects compared with MET-treated subjects ($P < 0.001$, Figure 2). To better understand the impact of dysbiosis on engraftment, we evaluated baseline microbial diversity by prior antibiotic received and observed that the diversity of Bacteroidetes and Firmicute species was lower in VAN-treated subjects compared with MET-treated subjects ($P < 0.001$, Figure 3).

Conclusion. In this first phase 1b study of a fermented microbiome drug in subjects with primary CDI, SER-262 was safe and well-tolerated. The higher efficacy rates of SER-262 in reducing rCDI among VAN-treated subjects may be due to low baseline microbial diversity, which creates an ecologic niche for greater engraftment of dose species. Treatment of *C. difficile* with VAN, followed by restoration of colonization resistance with SER-262, is a promising 2-pronged therapeutic paradigm to reduce rCDI.

Figure 1. CDI Recurrence rates by treatment and qualifying antibiotic episode

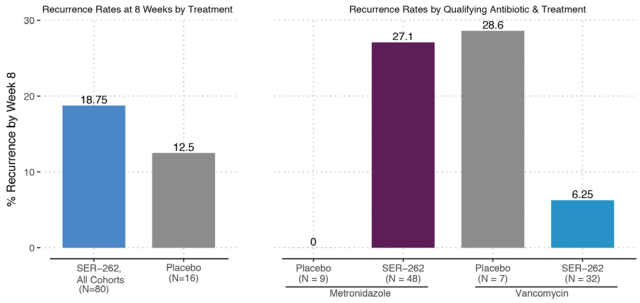

Figure 2. SER-262 Engraftment (Defined as Total Signal Detected across strains) by Qualifying Antibiotic