Antibiotic Susceptibility by Organism and Resistance Determinants: Gram Positive Organisms							
Organism	Resistance	#	OXA	VAN	AMP	PEN	CRO
S. aureus	mecA	30	0%	100%	-	-	-
	None	54	100%	100%	-	-	-
E. faecalis	vanA/B	3	-	100%	100%	-	-
	None	18	-	100%	87%	-	-
E. faecium	vanA/B	8	-	0%	0%	-	-
	None	6	-	100%	50%	-	-
S. agalactiae	None	7	-	-	100%	-	-
S. pneumoniae	None	10	-	-	-	90%	100%
S. pyogenes	None	8	-	100%	100%	-	-

OXA, oxacillin; VAN, vancomycin; AMP, ampicillin; PEN, penicillin; CRO, ceftriaxone; -, susceptibility testing results not available

Organisms Isolated Following a Negative Verigene Result			
Gram Stain	Organism	*n*	% of Total
Gram Negative Rods	Bacteroides spp	11	32.35%
	Clostridium spp	2	5.88%
	Eggerthella spp	2	5.88%
	Fusobacterium spp	1	2.94%
	Haemophilus spp	2	5.88%
	Klebsiella pneumoniae	1	2.94%
	Morganella morganii	1	2.94%
	Pasteurella multocida	2	5.88%
	Propionibacterium acnes	1	2.94%
	Providencia stuartii	1	2.94%
	Pseudomonas stutzeri	1	2.94%
	Serratia marcescens	6	17.65%
	Sphingomonas paucimobilis	1	2.94%
	Stenotrophomonas maltophilia	2	5.88%
	Total	34	100.00%
Gram Positive Rods	Bacillus spp	4	40.00%
	Corynebacterium spp	1	10.00%
	Eggerthella spp	1	10.00%
	Propionibacterium acnes	3	30.00%
	Rhodococcus corynebacterioides	1	10.00%
	Total	10	100.00%
Gram Positive Cocci in Pairs and/or Chains	Enterococcus spp	2	40.00%
	Leuconostoc spp	1	20.00%
	Peptostreptococcus spp	2	40.00%
	Total	5	100.00%
Gram Positive Cocci in Clusters	Actinomyces israelii	1	5.26%
	Bacillus spp	1	5.26%
	Dermacoccus nishinomiyaensis	1	5.26%
	Fingoldia magna	3	15.79%
	Gemella spp	2	10.53%
	Kocuria kristinae	1	5.26%
	Micrococcus spp	7	36.84%
	Peptostreptococcus spp	2	10.53%
	Rothia mucilaginosa	1	5.26%
	Total	19	100.00%
Gram Variable Rods	Bacillus spp	5	38.46%
	Bacteroides spp	2	15.38%
	Clostridium spp	1	7.69%
	Corynebacterium spp	1	7.69%
	Granulicatella adiacens	1	7.69%
	Lactobacillus spp	1	7.69%
	Stenotrophomonas maltophilia	2	15.38%
	Total	13	100.00%

Organisms identified by Vitek MS

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145. Liver Steatosis as a Risk Factor for Invasive Group B Streptococcus Infection in Non-Pregnant Adults

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Session: 37. Bacteremia, CLABSI, and Endovascular Infections
Thursday, October 3, 2019: 12:15 PM

Background. Nonalcoholic fatty liver disease (NAFLD) is the most common cause of chronic liver disease associated with metabolic syndrome and systemic changes in immune response. However, the impact of NAFLD on bacterial infections is unknown. Group B Streptococcus (GBS) infection is a significant cause of invasive disease among adult non-pregnant patients with high mortality rates, associated with diabetes mellitus and obesity as the most common underlying conditions. The aim of this study was to analyze the association of liver steatosis with invasive GBS disease outcomes.

Methods. A retrospective, cohort study of all non-pregnant adult patients diagnosed with invasive GBS infection (GBS isolated from the normally sterile site) was conducted at the University Hospital for Infectious Diseases Zagreb during a 14-year period.

Results. Of the 127 patients with invasive GBS, 90 had complete data and were included in the study. Disease primarily presented as bacteremia without focus (34; 37.8%), cellulitis/erysipelas (27; 30.0%), pneumonia (11; 12.2%) and endocarditis (8; 8.9%). The most common co-morbidities were diabetes (36; 40.0%), dyslipidemia (35; 38.9%), cardiovascular (32; 35.6%), peripheral vascular disease (18; 20.0%) and malignancy (16; 17.8%). Based upon the results of abdominal US the patients were divided into two groups: with steatosis (39; 43.3%) and without steatosis (51; 56.6%). The patients with liver steatosis were younger (63 ± 13 vs. 71 ± 14 years, $P = 0.01$), had higher AST (45.0; IQR 30–71 vs. 28.5; IQR 20–71, $P = 0.047$) and ALT (38; 25.5–55.5 vs. 21.5; 14–40, $P = 0.009$). There were no differences in clinical presentation and comorbidities between groups. The in-hospital mortality was 43.5% in patients with steatosis (17/39) and 17.6% (9/51) in control group ($P = 0.009$). Logistic regression analysis showed that endocarditis (OR 200.8; 95% CI 11.5–3512.5), primary bacteremia (6.5; 1.7–25.0), qSOFA ≥2 (20.2; 4.2–97.6) and liver steatosis (8.4; 2.0–35.1) were associated with in-hospital mortality.

Conclusion. Our findings showed that invasive GBS disease has significant mortality, which is independently associated with liver steatosis.

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

146. Infective Endocarditis in South Korea: a 12-year Single-Center Experience of 419 Patients

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Session: 37. Bacteremia, CLABSI, and Endovascular Infections
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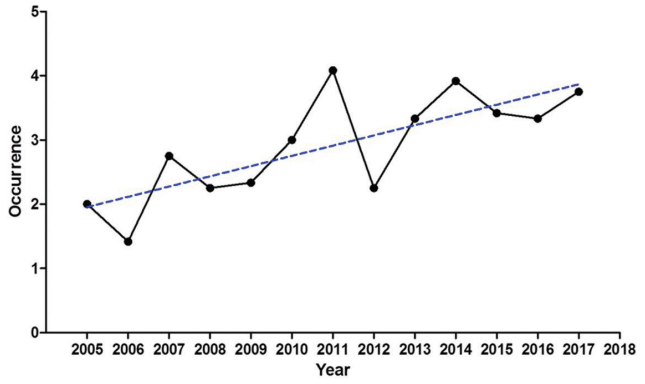
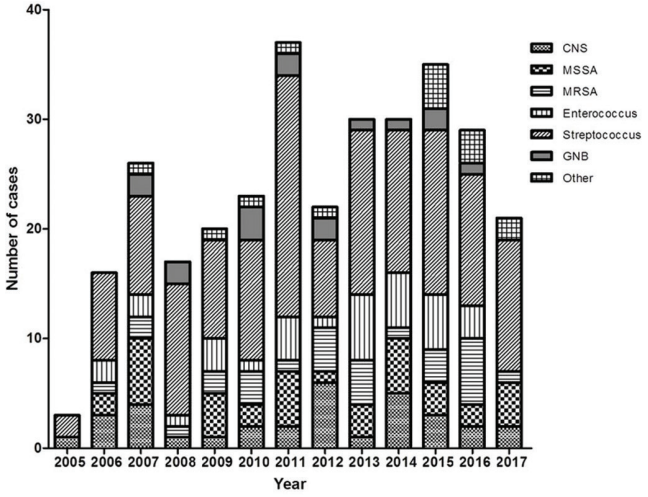
Background. Infective endocarditis (IE) is a potentially lethal disease that has undergone constant changes in epidemiology and pathogen. Treatment of IE has become more complex with today's myriad healthcare-associated factors as well as regional differences in causative organisms. Therefore, it is necessary to investigate the overall trends, microbiological features, clinical characteristics and outcomes of IE in South Korea.

Methods. We performed a retrospective cohort study of patients with the diagnosis of probable or definite IE according to the modified Duke Criteria admitted to a tertiary care center in South Korea between November 2005 and August 2017. Poisson log-linear regression was used to estimate time trends of IE incidence rate and mortality rate. Risk factors for in-hospital mortality were evaluated by multivariate logistic regression analysis including an interaction term.

Results. There were 419 IE patients (275 male vs. 144 female) during the study period. The median age of the patients was 56 years. The annual incidence rate of IE of our institution was significantly increased. (RR 1.05; 95% CI, 1.02–1.08; $P = 0.006$) The mortality rate showed trends toward down, but not statistically significant ($P = 0.875$). IE was related to a prosthetic valve in 15.0% and 21.7% patients developed IE during hospitalization. The mitral valve was the most commonly affected valve (61.3%). Causative microorganisms were identified in 309 patients (73.7%) and included streptococci (34.6%), followed by *Staphylococcus aureus* (15.8%) and enterococci (7.9%). The in-hospital mortality rate was 14.6%. Logistic regression analysis found aortic valve endocarditis (OR 3.18; $P = 0.001$), IE caused by staphylococcus aureus (OR 2.32; $P = 0.026$), a presence of central nervous system embolic complication (OR 1.98; $P = 0.031$), a high SOFA score (OR 1.22; $P = 0.023$) and a high Charlson's comorbidity index (OR 1.11; $P = 0.019$) as predictors of in-hospital mortality. On the other hand, surgical intervention for IE was found to be a protective factor against mortality. (OR 0.25, $P < 0.001$)

Conclusion. Although IE has been increasing, the mortality rate has not yet reduced significantly. Studies on causative organisms of IE and risk factors for mortality are warranted in improving prognosis.





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

147. Non-Fermenting Gram-Negative Bloodstream Infection: A Multicenter Retrospective Cohort Study

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Session: 37. Bacteremia, CLABSI, and Endovascular Infections
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Background. Few data exist on clinical characteristics, therapeutic management and outcome of patients with Non-Fermenting Gram-negative bloodstream infection (NFGN-BSI). Our aim is to describe a large cohort of patients with NFGN-BSI and to investigate risk factors for 30-day mortality. Further, the impact of the new difficult to treat resistance (DTR) definition will be investigated.

Methods. Retrospective multicenter study of patients diagnosed with NFGN-BSI at three large Italian hospitals (Bologna, Genova, Torino), over a 4-year period (2013–2016). Exclusion criteria: age <18 years, clinical data not available, polymicrobial BSI, death within 72 hours from drawing index blood cultures (BCs). Carbapenem resistance (CR) was defined according to 2015 CDC definitions, and DTR as resistance to all β-lactams and fluoroquinolones. Active empiric therapy (AET) was defined as at least one *in vitro* active drug administered within 24 hours from drawing index BCs. Endpoint was all-cause 30-day mortality.

Results. 521 patients with NFGN-BSI were analyzed: 63.3% male, median age 67 (IQR 55–78) years, median Charlson index 6 (IQR: 3–7). Most episodes were hospital acquired 72.9%. Etiology distribution: *Pseudomonas aeruginosa* 69.9%, *Acinetobacter baumannii* 19.6%, and *Stenotrophomonas maltophilia* 10.6%. CR and DTR rates were 38.6% and 26.9%. Main infection sources were deemed as primary 50.7%, CVC-related 26.5%, and lower respiratory tract 16.3%. Source control and ID consultation were performed in 33.4% and 47.6% of cases. AET rate was 38.2%. Empiric and definitive antibiotic treatment cohorts consisted of 377 and 472 patients, respectively. There was high heterogeneity in antibiotic choice with 30 and 48 different regimens in empiric and definitive cohort, respectively. Combination therapy was administered in 22.3% of empiric cohort and in 37.3% of definitive cohort patients. Independent risk factors for 30-day mortality were age (HR 1.03, 95% CI 1.01–1.05, P = 0.001), SOFA (HR 1.25, 1.15–1.36, <0.001), DTR (HR 2.73, 1.60–4.65, <0.001), and AET (HR 0.50, 0.25–0.99, 0.05).

Conclusion. High heterogeneity in therapeutic management of patients with NF-GNBSI was observed. DTR was a strong predictor of mortality, AET was associated with improved outcome.

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

148. Retrospective Evaluation of Acute Cholangitis and Clinical Implication and Management of Secondary Bacteremia

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Session: 37. Bacteremia, CLABSI, and Endovascular Infections
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Background. Optimum duration of antimicrobial therapy for acute bacteremic cholangitis is not well established; however, 4–7 days is recommended by the 2018 Tokyo guidelines in those without Gram-positive bacteremia.

Methods. A retrospective study performed at Mayo Clinic - Rochester, Florida and Arizona sites was conducted, reviewing all adult patients with the first episode of acute cholangitis secondary to biliary stone obstruction, between January 1, 2012 and December 31, 2017. We reviewed the duration of prescribed antimicrobials.

Results. Among 331 included cases, 197(60%) were men, 66 (20%) were immuno-compromised. Presenting symptoms included fever in 202 (61.5%), abdominal pain in 289 (87%), jaundice 128(38.7%), and altered mentation in 49 (15%). Among these, 256 (77%) were classified as "definite" and 38 (11.5%) were "suspected" using the 2018 Tokyo guideline classification. Cholangitis grade was grade III in 134 (40.5%); grade II in 115 (34.7%); and grade I in 82 (24.8%). Majority of cases, 321 (97%), underwent source control—most commonly 309 (96%) achieved by endoscopic retrograde cholangiopancreatography (ERCP). Source control occurred within 24 hr of presentation in 197 (61.4%) of the cases. Bacteremia was documented in 131/277 (47%). Majority of bacteremias were due to Gram-negative organisms in 119 (91%). Mean duration of antibiotic therapy following "source control" was 9.6 days (SD 7.0). Cases with bacteremia, resulted in longer treatment duration, mean of 13 days (SD 5.6), regardless of the isolated organism. Overall 30 day mortality was 14/331 (4.2%). No mortality difference was noted in patients who underwent early (within 12 hours) vs. later source control (4.55% Vs. 4.53%), nor in those who received more or less than 6 days of antibiotic therapy after source control (4.7% Vs. 3.9%, P = 0.76). No difference in mortality was observed in those with or without bacteremia.

Conclusion. Our results note the use of longer courses of antimicrobials for management of bacteremic cholangitis, regardless of the organism type. This population could be a prime target for an antimicrobial stewardship intervention, to decrease the duration of prescribed antimicrobials in accordance with recent guidelines.

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149. Short vs. Long Course of Antibiotics for Uncomplicated Gram-Negative Bacteremia

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Background. Bloodstream infections (BSI) continue to be a major cause of morbidity and mortality in the United States; thus, the correct choice of antibiotics for an appropriate duration is imperative. However, there are limited recommendations on adequate duration of treatment of bacteremia caused by Gram-negative organisms. Therefore, treating an infection for an adequate duration to prevent complications while preventing adverse effects from unnecessary antibiotic exposure remains a balancing act. This study aims to compare clinical outcomes between patients treated with a short (7–10 days) vs. long (11–20 days) course of antibiotics for uncomplicated gram-negative bacteremia.

Methods. This single-center retrospective cohort study evaluated adult patients admitted between January 2007 to October 2018 with a blood culture positive for gram-negative bacteria. Data came from the University of Kentucky Microbiological Laboratory and Center for Clinical and Translational Science (CCTS) Data Bank. Patients included must have received appropriate antibiotics for at least 7 days. Appropriate antibiotics were defined as those to which the organism is susceptible with day one of therapy as the first day of appropriate antibiotic therapy. Patients were excluded if they were treated with aminoglycoside monotherapy, had polymicrobial bacteremia, or if treated for longer than 20 days of therapy.

Results. A total of 466 patients were identified (208 in the short-course group and 258 in the long course group). Gender and ethnicity were similar across both groups. The patients in the long course group had more ICU admissions compared with the short-course group (52.7% vs. 43.3%, P = 0.0426), tended to be older (57 ± 16.7 vs. 53 ± 15.9 years, P = 0.0119), had a higher Charlson Comorbidity Index (5.7 ± 3.6 vs. 4.6 ± 3.6, P = 0.0009) and remained admitted to the hospital longer (23.2 ± 25.6 vs. 15.8 ± 17.5 days, P = 0.0002). However, patients treated with a long course had no difference in 30-day mortality compared with the short-course group (3.9% vs. 3.4%, P = 0.7701).

Conclusion. Patients with an uncomplicated gram-negative BSI treated with a short course (7–10 days) of antibiotics do not appear to have a significant difference in 30-day mortality compared with those patients treated with a long course (11–20 days).

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