Results. First patient (history of multiple myeloma) underwent endoscopy complicated by aspiration pneumonia and blood culture positive for E. meningosepticum infection. He was treated with ciprofloxacin, cefotin, minocycline and metronidazole and was discharged in stable conditions after 10 days. The second patient (current acute myelogenous leukemia) had neutropenic fever in the setting of recent chest port infection. Blood and bone marrow showed E. meningosepticum and was treated with ciprofloxacin, meropenem and minocycline successfully. The third patient (history of esophageal adenocarcinoma and acute myelogenous leukemia) had history of recent pneumonia and cellulitis who came in with recurrent neutropenic fever. Blood culture was positive for E. meningosepticum and was treated with ciprofloxacin and minocycline. However, the infection was complicated by multorgan failure and required tracheostomy. As these three cases illustrate, E. meningosepticum bacteremia has high 28-day mortality rate (41%).

Conclusion. Early identification of the pathogen along with empiric treatment with a fluoroquinolone and/or minocycline is indicated to reduce morbidity and mortality.

Disclosures. All authors: No reported disclosures.

190. Clinical Presentation of Streptococcus gallolyticus Infections DON KANNANGARA, MD, MSc, PhD, DM, DTM & HM, HARCP and Dhyanesh Pandya, MD, St Luke’s University Health Network, Bethlehem, Pennsylvania

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

Background. There are multiple publications on the association of Streptococcus gallolyticus (SG) with malignancies of the colon. SG has been also found in association with hepatoportal carcinoma, biliary tract infections, meningitis, endocarditis, urinary and other infections. In a preliminary analysis of SG and other streptococcal infections, we find that any of the GI flora may gain access to the bloodstream when there is a breach of the mucosa due to inflammation or malignant invasion. In our study, the majority of SG infections were polymicrobial and lower urinary tract infections were the most common presentation. Only 2 out of 45 had gastrointestinal malignancies both with polymicrobial blood culture results.

Methods. We evaluated 45 cases of SG seen in our health network hospitals for the past 15 months. The charts of all SG isolates were reviewed for age, sex, clinical presentation, laboratory data and susceptibilities.

Results. There were 34 female and 11 male patients. The majority were elderly with only 5 patients below age 50. Thirty patients presented with urinary infections, 28 lower and 2 upper tract. All except 4 urinary infections were in females. Sixteen urinary infections were polymicrobial and 14 monomicrobial. Two upper tract urinary infections were monomicrobial. There were 8 bloodstream infections, 4 polymicrobial and 4 monomicrobial. Three gall bladder infections were polymicrobial and one monomicrobial. Two liver abscesses yielded polymicrobial flora. Only 4 patients had cancer 1. Metastatic pancreatic cancer 2. Carcinoma of the ampulla of Vater and 1. aortic prosthetic valve endocarditis. All SG isolates tested were susceptible to ciprofloxacin, meropenem and minocycline.

Conclusion. The most common presentation was urinary. There was a higher number of females due to a large number of urinary infections. The majority of infections were polymicrobial including all 4 cancer patients. Two bacteremias were associated with gastrointestinal malignancies but none with the colon. SG isolates were susceptible to penicillin, ceftriaxone and vancomycin.

Disclosures. All authors: No reported disclosures.

191. Appropriateness of Empiric Antibiotics for Enterobacteriaceae Bacteremia Brandon J. Smith, MD, PharmD; Abigail Kois; Nathan Garrett; Joseph Tholany, MD; and Ricardo Arbulu, MD; University of Pittsburgh School of Pharmacy, Pittsburgh, Pennsylvania; University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania; University of Pittsburgh School of Pharmacy, Pittsburgh, Pennsylvania; University of Pittsburgh Medical Center Mercy Hospital, Pittsburgh, Pennsylvania

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

Background. Appropriate empiric antibiotic therapy is associated with decreased mortality and recurrence in patients with Enterobacteriaceae bacteremia (EB). Increasing bacterial resistance adds an additional layer to this complex clinical scenario. Swift utilization of appropriate antibiotics is crucial for improved patient outcomes. However, prolonged and excessively broad antibiotic coverage is not without its own complications. Our study aimed to review the appropriateness of empiric antibiotic therapy.

Methods. A retrospective chart review of all patients >18 years of age who were admitted to a single academic community hospital during 2018 EB anytime throughout their hospitalization. The primary endpoint was the appropriateness of empiric antibiotic therapy. In the post-intervention group, pharmacists monitored RDT results and provided recommendations. Our IRB-approved, prospective study assessed time to antimicrobial de-escalation in treatment of resistance marker-negative E. coli and K. pneumoniae BSI before (January 1 to December 31, 2018) and after Stewardship intervention (January 1 to March 31, 2019). Secondary outcomes included days of therapy (DOT) of target narrow-spectrum β-lactams, carbapenems, and non-carbapenem anti-pseudomonal (NCAP) β-lactams, length of stay (LOS), and treatment failure.

Results. Our study identified 178 patients with EB. Most common organisms included E.coli (64.6%), K. pneumoniae (11.8%) and P. mirabilis (7.3%). Resistance patterns included 1 CRE (0.57%) and 17 ESBL (9.7%) isolates. Most common sources of infection included urinary (63.5%) and intraabdominal (13.5%). Based on the sensitivity reports of tested isolates, 83.7% of patients received appropriate empiric antibiotics. After adjustment for SOC, 11.8% of ESBL patients (2/17) and 0% of CRE (0/1) patients received appropriate therapy. Comparatively 89.0% of patients without ESBL or CRE infections. This highlights room for improved rapid diagnosis and identification of risk factors predisposing to resistant organisms thereby decreasing the time to appropriate antibiotic therapy.

Disclosures. All authors: No reported disclosures.

192. Augmenting Utility of Rapid Diagnostic Testing in Treatment of Gram-Negative Bacteria with Stewardship Intervention Jessica Gerges, PharmD; Karian Raja, PharmD, BCPS, BCIDP; Mithesh Patel, PharmD, BCCCP; Ruben Patel, PharmD, BCPS, BCCP; Brandon Chen, PharmD, BCPS® and Mona Philips, RPh, MAS; Clara Maass Medical Center, RWJBarnabas Health, Belleville, New Jersey

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

Background. Rapid diagnostic tests (RDT) can identify pathogens in bloodstream infections (BSI) in less than 24 hours. Our institution utilizes an RDT for blood cultures (BCx) that can detect various organisms and resistance determinants. A retrospective evaluation conducted in our institution calculated the negative predictive value (NPV) of various Gram-negative pathogens and susceptibility to target antimicrobials in the absence of detected resistance markers. Resultant NPV >90% for E. coli and K. pneumoniae to ceftriaxone support use of RDT with stewardship intervention for more rapid de-escalation of antimicrobial therapy in patients with resistance marker-positive BSI.

Methods. In our facility, all positive BCx are processed through RDT. In the post-intervention group, pharmacists monitored RDT results and provided recommendations. Our IRB-approved, prospective study assessed time to antimicrobial de-escalation in treatment of resistance marker-negative E. coli and K. pneumoniae BSI before (January 1 to December 31, 2018) and after Stewardship intervention (January 1 to March 31, 2019). Secondary outcomes included days of therapy (DOT) of target narrow-spectrum β-lactams, carbapenems, and non-carbapenem anti-pseudomonal (NCAP) β-lactams, length of stay (LOS), and treatment failure.

Disclosures. All authors: No reported disclosures.
using the Fisher exact or Chi-square and t-test for categorical and continuous data, respectively.

**Results.** Of the 12,893 evaluated RDT results in the pre-intervention group and 2,238 post intervention, 41 and 12 patients met inclusion criteria, respectively. Baseline characteristics were similar in both groups. Time to de-escalation to a target agent was decreased by 24 hours after stewardship intervention (50 vs. 74.6 hours) ($P = 0.14$). There were no statistically significant differences in DOTs for target agents (5.19 vs. 5.25 DOT; $P = 0.48$), carbapenems (1.29 vs. 1.08 DOT; $P = 0.41$), or NCAP β-lactams (1.73 vs. 2.33; $P = 0.25$). Treatment failure (2 in each group; $P = 0.17$) and LOS (10.9 vs. 11.9 days; $P = 0.4$) were similar between groups. Protocol compliance and intervention acceptance rate was approximately 60%.

**Conclusion.** Appreciation of NPVs and utilization of stewardship intervention allowed for early de-escalation of empiric therapy in patients with resistance marker-negative *E. coli* and *K. pneumoniae* bacteremia.

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

**193. Comparison of Survival for MSSA and MRSA Endocarditis**
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Session: 37. Bacteremia, CLABSI, and Endovascular Infections
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**Background.** Prior studies have yielded conflicting findings regarding outcomes for MRSA vs. MSSA infective endocarditis (IE). Our experience suggests that MSSA IE is not any less severe than MRSA IE. The purpose of this study was to compare survival in MSSA and MRSA IE.

**Methods.** Episodes of IE caused by *Staphylococcus aureus* were identified from the Cleveland Clinic Infective Endocarditis Registry. Only the first episode was included for each patient. Acceptance for surgery was considered surgical treatment. Survival from the surgical decision date was compared for MSSA vs. MRSA endocarditis using multivariable Cox proportional hazards regression. Selection of variables for the model was done by stepwise backward elimination from a collection of clinically important baseline variables.

**Results.** Between January 1, 2008 and January 1, 2010, 76 episodes of IE caused by *S. aureus* were identified. The mean (SD) patient age was 58 (15) years, 46 (61%) were males, 14 (18%) had a prior history of IE, 33 (43%) had diabetes mellitus, 22 (29%) had end-stage renal disease (ESRD), 27 (36%) had prosthetic valve endocarditis (PVE), 70 (92%) had left side involvement, 27 (36%) had invasive disease, 59 (78%) were referred patients, and 39 (51%) were treated surgically. The mean (SD) time to decision on surgery was 6 (7) days. Of these episodes 40 (53%) had MSSA IE and 36 (47%) had MRSA IE. There was no difference in hazard of death between MSSA and MRSA IE (HR 0.98, 95% C.I. 0.54–1.78, P-value 0.96), after adjusting for age, ESRD, prior history of IE, PVE, invasive disease, calendar year, and surgical treatment, which were the significant explanatory variables in the multivariable analysis. Survivals predicted by the model for a reference patient with MSSA IE and MRSA IE are shown in the figure.

**Conclusion.** Preliminary findings suggest that survival in MSSA IE may be similar to that in MRSA IE. The study is limited by its small sample size. The study finding will need confirmation with a larger sample.

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

**194. Description of Positive Blood Culture Results not Identified by Verigene**
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**Average DOT – Carbapenem**

**Average DOT – Target Agent**

**Average DOT- NCAP Beta-Lactams**

**Predicted survival for MSSA and MRSA endocarditis in a reference patient**

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

**195. Description of Positive Blood Culture Results not Identified by Verigene**
Informant Empiric Antibiotic Selection
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