duration of inpatient antibiotic treatment and increase likelihood of completion of antibiotic therapy, however this requires further study.

Disclosures. **Amber C. Streifel, PharmD, BCPS**, **Melinta** (Advisor or Review Panel member) **Monica K. Sikka, MD**, **FG2** (Scientific Research Study Investigator)

189. Bacteremia among COVID-19 and Non-Covid-19 Patients Admitted in the ICU

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Background. The aim of this work were to investigate the rate and aetiology of bloodstream infection collected from COVID and non-COVID patients admitted in the ICU

Methods. A retrospective cohort study was conducted on PCR Covid-19 positive patients admitted in the ICU from 20th March to 30th April 2020. Corresponding data from the same period in 2019 collected of all consecutive patients admitted in the same ICU were retrospectively reviewed for the presence of microbiologically documented bloodstream infections at least 8 hours after admission. All patients in the cohort study were on mechanical ventilation, or at some point during their ICU admission required mechanical ventilation.

Results. We identified a total of 19 (38%) BSIs in the COVID-19 group and 10 (12%) BSI in the non-COVID-19 group (p=0,8). COVID-19 patients had an increased probability to develop ICU-BSI, at a median of 8 days of ICU admission as opposed to 6 in the non-COVID-19 group. Patients were comparable in terms of age, and APACHE II score. Out of 19 BSI CoVID-19 patients, 14 (73%) were male vs 5 (50%) in the non-CoVID-19 BSI patients (p=0.0007). Of all BSI-CoVID-19 patients, 7 cases (37%), 3 (16%), and 3(16%) had underlying diseases such as hypertension, diabetes, and obesity vs 1(9%), 0(0%), and 0 (0%) in the BSI-non CoVID-19 patients statistically significant at p=0.004, p=0.05, and p=0.05, respectively. ICU-acquired BSIs were mostly due to multi-drug-resistant pathogens. Clinical outcomes were statistically significantly different between patients with CoVid-19 BSI 7(37%) and 2(20%)in BSI-non-CoVID-19 pneumonia (p=0.02).

Conclusion. Our findings emphasize that although the incidence of BSI in CoVID-19 positive ICU admitted patients slightly increased their impact on overall outcome was significantly worse. Consequently, it is important to pay attention to bacterial superinfections in critical patients positive for COVID-19.

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

190. Outcomes of Early Ceftaroline-based Combination Therapy for Methicillin-resistant *Staphylococcus aureus* Bacteremia

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Background. Monotherapy with vancomycin (VAN) or daptomycin (DAP) remains the guideline-driven standard of care for methicillin-resistant *Staphylococcus aureus* bacteremia (MRSA-B) despite concerns regarding efficacy. While combination therapy is often utilized as salvage treatment for persistent MRSA-B, growing data suggest a potential benefit of combination therapy with ceftaroline as initial therapy for MRSA-B. In light of these data, we updated practice guidance at our institution for management of MRSA-B in March 2020 to favor initial combination therapy with ceftaroline. Herein, we present an assessment of outcomes of patients with MRSA-B initiated on early combination therapy.

Methods. This was a single-center, retrospective, cohort study of adult patients admitted to the University of Virginia with MRSA-B between July 1, 2018 and February 28, 2021. Patients were considered to have received combination therapy if they received VAN or DAP plus ceftaroline (CPT) within 5 days of index blood culture, and monotherapy if during that period they received VAN and/or DAP alone. The primary outcome was a composite of persistent bacteremia, 30-day all-cause mortality, and 30-day bacteremia recurrence. Time to microbiological cure and safety outcomes were also assessed. A propensity score-weighted logistic regression was conducted. A post-hoc analysis of the primary composite outcome was performed in which patients were only deemed to have received combination therapy if it was started within 72 hours.

Results. Of 94 patients included, 57 received monotherapy (55 VAN, 2 DAP) and 37 received combination therapy with CPT (30 VAN, 7 DAP). There was no difference between groups for the primary composite outcome in the primary analysis (OR 2.7, 95% CI 0.95-7.72) or the post-hoc analysis (OR 2.37, 95% CI 0.68-8.22). Time to microbiological cure was not different between groups (mean difference 1.47, 95% CI 0.20-2.74). Safety outcomes were similar.

Conclusion. In this retrospective study, there was no clear benefit or harm of early initiation of combination therapy for MRSA-B. Additional study of initial combination therapy with ceftaroline is warranted given the small number of subjects in the study presented.

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

191. Oral Antibiotic Step-Down Therapy for Non-Staphylococcal Gram-Positive Bloodstream Infections

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Background. Bloodstream infections are traditionally treated with intravenous (IV) antimicrobial therapy, which may increase length of stay and healthcare costs. The purpose of this study is to evaluate if oral antibiotic step-down therapy for non-staphylococcal gram-positive bloodstream infections (GP-BSIs) is non-inferior to IV antibiotics.

Methods. This single-center, retrospective cohort study included patients with a non-*Staphylococcus aureus*, non-*Staphylococcus lugdunensis* GP-BSI from January 2017 to December 2019. Patients were excluded if they fit any of the following criteria: organism identified as contaminant, polymicrobial BSI, recurrent BSI within the past 90 days, or receipt of an effective antibiotic for a duration longer than what is indicated for BSI treatment. Patients were categorized into those who received an IV antibiotic for the total duration of therapy and those who received an oral step-down antibiotic for at least one-third of the treatment course. The primary composite outcome was the incidence of 90-day clinical failure consisting of 90-day all-cause mortality, change in therapy due to inadequate clinical response, and 90-day BSI recurrence. The secondary outcomes included the individual components of the primary composite outcome, line-related complications, and hospital length of stay. Bivariate analysis was conducted to assess for predictors of 90-day clinical failure.

Results. A total of 308 patients were included (oral group, n=94; IV group, n=214). Pitt Bacteremia Scores were low overall, but higher in the IV group (0 vs 1, p=0.045). The oral group had a higher proportion of GP-BSI caused by streptococcal species (76% vs 61%, p< 0.001). The oral group had a lower incidence of 90-day clinical failure and was found to be noninferior to the IV group (9% vs 14%; mean difference -5%, 90% CI -12.7 to 2.6). The IV group had a longer hospital length of stay (4 vs 6 days, p< 0.001), however there were no other significant differences in secondary outcomes. Bivariate analysis found no significant predictors of 90-day clinical failure.

Conclusion. Oral antibiotic step-down therapy was found to be non-inferior to IV antibiotic therapy, and thus may be an alternative option for the treatment of non-staphylococcal GP-BSIs.

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

192. Epidemiology, Microbiological Characteristics and Clinical Outcomes of Invasive Blood Stream Infections of Group B Streptococcal Isolates From Qatar

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Background. Group B Streptococci (GBS) or *Streptococcus agalactiae* colonize humans genitourinary and gastrointestinal tracts particularly of females. The pathogen is capable of causing invasive disease primarily in infants, pregnant and postpartum women as well as the elderly and patients with comorbidities. There is paucity of studies of the disease with regional differences in prevalence and presentation of invasive blood stream infection (BSI). In this study, we aim to assess prevalence, microbiological characteristics as well as clinical outcomes of invasive GBS disease from all ages groups at Hamad Medical Corporation (HMC), Qatar.

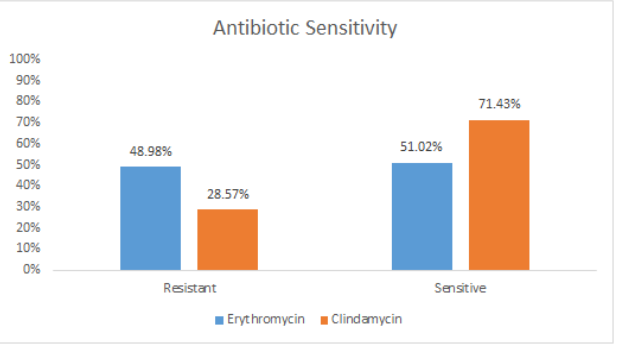
Methods. A retrospective study was conducted on all patients with microbiologically confirmed GBS bacteraemia between January 2015–March 2019. Demographic, microbiological characteristics as well as clinical data were extracted from hospital information system.

Results. Out of 196 confirmed cases of GBS blood stream infection, 63.7 % were females (125/196) of whom 44.8 % were pregnant (56/125), 53.6 % (30/56) were colonized while 36.3 % (71/196) were males. There were three distinct age group populations, paediatric less than 4 years of age at 35.7 %, young adults 25-34 (20.9 %) and the elderly > 65 year (17.4 %). Presenting symptoms were mild with fever recognised in only 53 % of cases (104/196) while 89% of cases had low Pitt bactermia score of 0-2. Microbiological characteristic using disc diffusion tests demonstrated all isolates were universally sensitive to penicillin (100%, 196/196) with significant resistance to clindamycin at 28.6 % (56/196) and erythromycin at 49 % (96/196) of which 34.4 % (33/96) had inducible clindamycin resistance. Clinical outcome showed high cure rate of 87.25% (171/196) with low complications at 8.76 % (17/196) and 4% (8/196) 30-day mortality.

Table 1: Demographic data for GBS infected patients in Qatar.

Demographic variables (196 patients)	Numbers(percentage)
Gender	
Female	125 (63.78%)
Male	71 (36.22%)
Age (years) average	30.00 (0.16-51.50)
0-4 years	70 (35.71%)
5-14 years	2 (1.02%)
15-24 years	8 (4.08%)
25-34 years	41 (20.92%)
35-44 years	18 (9.18%)
45-54 years	9 (4.59%)
55-64 years	14 (7.14%)
65+ years	34 (17.35%)
Nationality	
Expatriates	135 (68.88%)
Qatari nationals	61 (31.12%)
Associated diseases (comorbid)	
DM	19 (9.69%)
Gestational DM	9 (4.59%)
Others (CKD,CLD,Immunocompromised state)	62 (31.63%)
None	106 (54.08%)
Symptoms of GBS infection	
Fever	104 (53.06%)
Skin-Cellulitis	12 (6.12%)
CNS symptoms	5 (2.55%)
any combination	65 (33.16%)
No symptoms	4 (2.04%)
Urinary symptoms	1 (0.51%)
Pitt score	
Low (0-2)	176(89.79%)
Moderate (3-5)	11 (5.61%)
Sever (>/ 6)	9 (4.59%)

Antibiotic sensitivity profile for GBS isolates



Conclusion. *Streptococcus agalactiae* blood stream infection in Qatar is common in females, affects the very young, young adults and the elderly. Almost half of affected pregnant women are colonized. The organism remains universality sensitive to pencilling with significant resistance to clindamycin and erythromycin. Patients presents with mild symptoms with high cure rates, low complications and safe outcome for the majority of cases.

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

193. Evaluation of Severity Scores in Patients with Methicillin-Susceptible *Staphylococcus aureus* Bloodstream Infections

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Background. *Staphylococcus aureus* bloodstream infections (BSIs) are associated with increased morbidity, mortality, and healthcare costs. Severity of illness scores help stratify critically ill patients and assist providers in making decisions. The quick Pitt (qPitt) score is a reliable predictor of mortality in patients with Gram-negative BSIs (AUROC 0.85); however, limited data exist for using the qPitt in methicillin-susceptible *S. aureus* (MSSA) BSIs.

Methods. This retrospective cohort evaluated patients with MSSA BSIs. The primary outcome was the discrimination of the qPitt in predicting hospital mortality compared to the Pitt bacteremia score (PBS). Secondary outcomes were clinical failure and the predictive discrimination of the qPitt score in comparison to other severity scoring modalities. Categorical data were analyzed using chi-square test or Fisher's exact test. Continuous data were analyzed using Student's t-test or Mann-Whitney U. Predictive discrimination was determined by the area under receiver operating characteristic curve.

Results. One hundred patients were included with the mean age of 52 years (p=0.84) and a BMI of 30 kg/m^2. Males were predominant (70%). Mortality occurred in 13 patients who had more ICU admissions (92% vs. 37%; p< 0.01) and longer ICU LOS (10 vs. 5 days; p=0.03) despite similar baseline comorbidities. Time to definitive therapy was longer in the mortality group than non-mortality group (28 vs. 23 hours; p=0.79) though antimicrobial use did not differ. As outlined in Figure 1, the mortality group had higher severity of illness scores. The qPitt had a ROC of 0.83, indicating high discrimination. Overall, qPitt was found to be similarly predictive than PBS, equally as predictive as qSOFA, and more predictive than SIRS and APACHE II (Figure 1). Clinical failure occurred in 23% of patients; 54% of the mortality group experienced persistent BSI vs. 11% in the non-mortality group (p< 0.01), and 3% of the non-mortality group had recurrent infection (p=1.00).

Figure 1. Comparison of Severity of Illness Scores

Variable, mean (± SD)	Mortality (n=13)	Non - mortality (n=87)	*P*-value	AUROC
qPITT	2.15 ± 1.46	0.71 ± 0.99	0.00	0.83
PBS	4.85 ± 4.78	1.05 ± 1.74	0.01	0.86
SIRS	2.69 ± 1.03	2.25 ± 1.15	0.20	0.65
qSOFA	1.69 ± 0.86	0.85 ± 0.79	0.00	0.83
APACHE II	22.86 ± 7.34	16.64 ± 6.48	0.04	0.74

qPitt- quick Pitt score, PBS- Pitt bacteremia score, SIRS- systemic inflammatory response syndrome, qSOFA- quick sepsis-related organ failure assessment, APACHE II- acute physiology and chronic health evaluation, AUROC- area under receiver operating characteristic curve

Conclusion. Compared to previous studies on Gram-negative BSIs, the qPitt performed similarly in MSSA BSIs. The qPitt can be considered for use in predicting mortality for patients with MSSA BSIs; however, further studies are needed to confirm these results.

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

194. Antimicrobial Susceptibility Data of *Staphylococcus lugdunensis* After the Implementation of Rapid Molecular Blood Culture Diagnostics (Verigene® Gram-Positive Blood Culture Nucleic Acid Test)

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Background. *S. lugdunensis* is a coagulase negative staphylococci (CoNS) demonstrating high level pathogenicity. In contrast to other CoNS, *S. lugdunensis (SL)* remains susceptible to most antibiotics. Prior to the implementation of Verigene®, *SL* was identified by provider request only. We sought to describe the susceptibility data of *SL* isolated from blood culture after the implementation of multiplex PCR, as well as to determine the correlation of the *mecA* gene provided by Verigene® and oxacillin resistance.

Methods. Retrospective review of all blood culture isolates positive for *SL* from two major hospital systems, Memorial Hermann Hospital System (14 hospitals) and HarrisHealth System (two acute care hospitals) identified on Verigene® PCR. Multiple isolates detected from the same patients were excluded from this analysis. Memorial