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

Background. Bloodstream infections are a leading cause of mortality among hospitalized patients. Optimizing time to pathogen identification and receipt of appropriate antibiotic therapy significantly decreases mortality, morbidity, and length of hospitalization. Rapid diagnostic tests, such as Verigene, assist in the early identification of bacteria and resistance determinants from positive blood cultures; however, Verigene assays are limited to the detection of 13 gram-positive and 9 gram-negative bacteria.

Methods. The purpose of this study was to describe gram-negative and gram-positive aerobic bacteria identified from positive blood cultures with no Verigene target detected and to use the susceptibilities to create an antimicrobial to assist in empiric antibiotic dosing. A total of 2325 blood cultures resulted between January 2017 and October 2018 underwent Verigene testing.

Results. Of the 2325 isolates, 383 (16.5%), had no Verigene organism or resistance mechanism detected. Of these, there were 239 (62.4%) gram-positive isolates, 141 (36.8%) gram-negative isolates, and 3 yeast isolates with 96 unique organisms. Seventy-six (19.8%) of the organisms identified by standard culture, but not Verigene testing, are included on Verigene panel. We analyzed nine common antibiotics active against gram-negative pathogens to determine percent susceptibilities against the isolated aerobes: amoxicillin (92.1%), cefepime (93.5%), cefazidime (94.0%), ceftriaxone (79.7%), ciprofloxacin (88.5%), gentamicin (91.9%), levofloxacin (86.9%), piperacillin–tazobactam (83.8%), and tobramycin (85.5%). Additionally, four antibiotics active against gram-positive organisms were analyzed for gram-positive susceptibilities: cephalaxine (91.8%), ceftriaxone (98.1%), levofloxacin (82.5%), and vancomycin (91.8%).

Conclusion. The results of this study provide clinicians with antibiotic susceptibilities against organisms that were not identified through Verigene to guide timely and appropriate antibiotic therapy against gram-negative and gram-positive aerobic bacteria.

Disclosures. All authors: No reported disclosures.

195. Descriptive Study of the Use of External Cooling Blankets in Hyperthermia
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Session: 37. Bacteremia, CLABSI, and Endovascular Infections
Thursday, October 3, 2019: 12:15 PM

Background. Fever is a beneficial physiologic response to infection and is protective in gram-negative bacteremia and invasive candidiasis. Cooling blankets (CBs) are used in fevers due to a perception of providing symptomatic relief. However, external cooling of septic patients has been shown to be an independent risk factor for adverse effects. Here, we present a retrospective analysis of CB use in our institution and the associations of infections with CB duration.

Methods. We reviewed electronic medical records of patients aged ≥18 years admitted to our teaching hospital between 2015–2017 and in whom a CB was used. Study variables included demographics and clinical characteristics such as infection and fever duration (time of CB start to first defervescence). Correlations between continuous variables were assessed using the Spearman's rank correlation test and the associations of infections with CB duration.

Results. A total of 200 patients met eligibility (pre-BCID, n = 102; post-BCID, n = 98). The composite endpoint was met in 34% of patients in the pre-BCID group and 29% in the post-BCID group (P = 0.45). Mortality at 30 days (17% vs. 17%, P = 1.00), persistent SAB (16% vs. 13%, P = 0.69), and rates of recurrence within 30 days (4% vs. 1%, P = 0.37) were similar between groups. ID consult increased after BCID implementation (83% vs. 92%, P = 0.001). More patients in the post BCID received appropriate durations of antibiotics (75% vs. 86%, P = 0.04) and had decreased time, in hours, to definitive therapy (7 ± 17 vs. 1 ± 5, P ≤ 0.05).

Conclusion. The management of SAB after implementation of BCID did not show improvements in the primary outcome but did show an improved time to appropriate therapy. A larger study is needed to determine whether improved time to appropriate therapy translates to an improvement in patient outcomes.

Figure 1: Clinical outcomes Pre-BCID and Post-BCID

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197. Infective Endocarditis Over a Five-Year Period in an Academic Teaching Center: The Validity of ICD Codes vs. Manual Chart Review
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Session: 37. Bacteremia, CLABSI, and Endovascular Infections
Thursday, October 3, 2019: 12:15 PM

Background. Endocarditis is a complex infection of the heart that can lead to a high rate of mortality and morbidity. As such, endocarditis is a major public health concern. There are many health systems that require a system for identifying and tracking cases of endocarditis. The aim of our study was to determine the validity of ICD codes to identify infective endocarditis cases and IDU.

Methods. Patients with ICD-9 or 10 discharge diagnosis codes for infective endocarditis were identified from our institution's electronic health record. ICD codes pertaining to substance abuse were used to classify patients according to IDU status. Readmissions during the same episode of infective endocarditis were excluded. We compared chart review to ICD code for the identification of infective endocarditis and IDU in a random sample of 296 of 1590 cases.

Results. Of 296 charts reviewed, 133 (44.9%) were excluded because they did not meet criteria for definite infective endocarditis by modified Duke's criteria or because the episode was a readmission. A total of 163 (55.1%) cases met inclusion criteria, all of whom were seen in consultation by the inpatient Infectious Disease service. Of these, 52 (31.9%) had IDU 9 or 10 codes linked to substance abuse. Following manual
chart review, we established that in fact 86 of these 163 cases (52.8%) had evidence of substance abuse.

**Conclusion.** Misclassification due to use of ICD codes is a well-established challenge to epidemiological research. However, the extent of misclassification in this analysis was greater than expected. If prior research on IDU and infective endocarditis has relied on medical record data alone without verification through manual chart review, the observed epidemiological trends may not be accurate.

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

198. Chart Validation of an Algorithm for Identifying Patients with Intravenous Drug Use-Associated Endocarditis Using Administrative Code Data

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**Session:** 37. Bacteremia, CLABSI, and Endovascular Infections

**Thursday, October 3, 2019: 12:15 PM**

**Background.** Studies using administrative data have described increasing rates of intravenous drug use (IVDU)-associated infective endocarditis (IE) in the United States. These studies used International Classification of Disease (ICD) diagnosis codes to identify hospitalized patients with IE and any illicit drug use (i.e., opioi, amphetamine, cocaine or sedative), but were hindered by absence of specific ICD codes for IVDU. We reviewed charts to determine the positive predictive value (PPV) of ICD codes for identifying patients with IE and IVDU.

**Methods.** We examined national Veterans Affairs (VA) administrative data from January 2010 to December 2017 to identify patients hospitalized for a first episode of potential IVDU-associated IE based on inpatient ICD 9 and 10 codes for both IE and any illicit drug use. The algorithm used to identify IVDU-IE in most prior studies. We randomly selected 100 of these patients nationally and reviewed hospital charts to confirm clinical documentation of: (1) IE, (2) any illicit drug use, and (3) current or past IVDU.

**Results.** We identified 340 patients with concurrent ICD codes for IE and drug use, increasing from 28 in 2010 to 51 in 2017 (82% increase). In chart review of 100 randomly selected patients, the PPV of ICD codes was 93% (95% CI 88–98%) for a documented clinical diagnosis of IE; 96% (95% CI 92–100%) for documented drug use by any route; and 95% (95% CI 53–73%) for documented IVDU. Among the 37% of patients without clinically documented IVDU, 30% (i.e., 11% of total patients) had clinical documentation stating that drug use was only by non-IV routes, 59% (22% of total) had documented drug use without mention of route of use, and 11% (4% of total) had clinical documentation that patients denied any drug use.

**Conclusion.** The incidence of first hospitalization for IE among patients with ICD codes for drug use increased by 82% from 2010 to 2017 in VA care. Concurrent ICD codes for illicit drug use had moderate PPV for identifying IVDU in setting of IE, largely due to identification of patients using drugs without documented intravenous use. There is a need to develop more accurate case-finding algorithms for identifying patients with IVDU-associated endocarditis, for both epidemiologic surveillance and quality improvement applications.

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

199. Infections in VADers: A True Villain of the Force

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**Session:** 37. Bacteremia, CLABSI, and Endovascular Infections

**Thursday, October 3, 2019: 12:15 PM**

**Background.** Ventricular assist devices (VADs) are increasingly used for the management of end-stage heart failure, but infection is a complication that has not been thoroughly studied. The purpose of our study was to compare patients who had surgical debridement vs. medical therapy alone for VAD-related/specific infections.

**Methods.** We performed a retrospective chart review on patients at Duke University Hospital (DUH) from 2015 to 2017. Patients with VAD-related/specific infections were included, per 2011 ISHHLT definitions. We reviewed electronic medical records for demographics, VAD implantation data, infectious episodes, surgical debridements and mortality. Descriptive statistics compared patients with and without debridement and compared with and without relapse.

**Results.** We found 94 infections in 72 patients. Descriptive statistics of the cohort and comparisons with and without debridement can be seen in Table 1. Sixty-one cases (65%) included debridement and 5 (5%) required pump exchange. Notably, patients with fever or bacteremia were more likely to undergo debridement. Of the patients that had a preoperative CT, sensitivity for deep infection (pump, pocket, or deep to the muscle) was 38%, yet specificity was 95%. For superficial infections (involving the driveline or superficial to the muscle), preoperative CT sensitivity was 95%; specificity was 65%. Table 2 shows intraoperative culture data. When the preoperative culture grew Staphylococcus species or Pseudomonas aeruginosa there was strong correlation with intraoperative organism (matched in >75% of cases). Table 3 compares treatments among patients with and without infective relapse. Relapse rate approached the same if patients received 2, 4, or 26 weeks of intravenous antibiotics.

**Conclusion.** We present a large single-center cohort [DCWM1] examining VAD-related/specific infections. While patients chosen for debridement may be sicker, these patients had a longer hospital stay and relapsed more often. Preoperative CT should be used with caution as it underestimates the extent of disease. However, preoperative driveline cultures correlated strongly with intraoperative cultures for most patients. There was no association between initial intravenous therapy duration and infection relapse.

**Table 1.** Demographic characteristics of total cohort and comparisons among patients who underwent debridement for treatment of infection and patients who did not undergo debridement for treatment of infection

**Table 2.** Organisms found intraoperatively and the number of organisms found preoperatively that are the same as the intraoperative cultures

**Table 3.** Comparing treatment and cultures in patients who suffered an infection relapse

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

200. Real-World Experience with Dalbavancin for Complicated Gram-Positive Infections: A Multicenter Evaluation

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