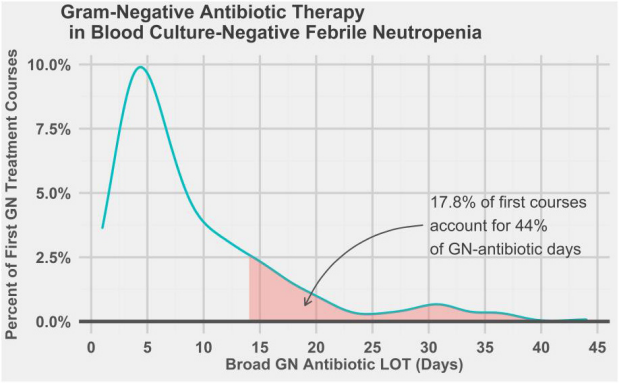
the positive cohort, and 321 (72.5%) encounters in the negative cohort. Thirty percent of encounters (36/122) in the positive cohort received more than one GN treatment course, compared to 10% (32/321) of those in the negative cohort. FN LOT was significantly longer in the positive cohort (median 10.5, IQR 13 days vs. 6, IQR 8 days, $p < 0.001$). Among encounters with negative cultures, 57 (17.8%) had a first FN LOT greater than 14 days, accounting for 44% of broad GN agent days within that population (Figure 1).

Gram-Negative Antibiotic Therapy in Blood Culture-Negative Febrile Neutropenia



Conclusion: Nearly 20% of blood culture-negative encounters received initial GN treatment courses exceeding 14 days, representing a sizeable target for antimicrobial stewardship interventions focused on FN treatment duration.

Disclosures: Rebekah W. Moehring, MD, MPH, Agency for Healthcare Quality and Research (Grant/Research Support)Centers for Disease Control and Prevention (Grant/Research Support)

204. Post-Liver Transplant Antimicrobial Use after the Expansion of a Pharmacist-Lead Antimicrobial Stewardship Program

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Session: P-7. Antimicrobial Stewardship: Special Populations

Background: Antimicrobial stewardship programs (ASPs) allow for infectious diseases (ID)-trained practitioners to focus on timely and appropriate antimicrobial use. In December 2016, the ASP at Indiana University (IU) Health expanded from one ID pharmacist to three. The purpose of this study was to assess the impact of an expanding ASP on broad-spectrum antimicrobial use within post-liver transplant patients.

Methods: This was a retrospective, cross-sectional study. Data were collected from patients aged at least 18 years old that received a liver transplant either before or after the ASP expansion. Patients were excluded if they survived less than 72 hours after transplant, if they received a multivisceral transplant, or if there was an active infection prior to transplantation. The hypothesis of this study was that an expanded ASP leads to a reduction in days of therapy (DOT) per 1000 patient-days for a composite of broad-spectrum antimicrobial agents within this patient population.

Results: A total of 268 patients were included in this study. Of the patients that received at least one dose of the studied antimicrobial agents, the median (IQR) DOT per 1000 patient-days in the pre- and post-ASP expansion cohort was 174.4 (117.6 – 333.3) and 142.9 (62.5 – 257.5), respectively. This was statistically significant (difference 48.6, 95% CI 7.5 – 83.3). Specifically, the post-ASP expansion cohort used less meropenem (difference 197.8, 95% CI 66.3 – 451.6) and vancomycin (difference 57.6, 95% CI 2.2 – 132.2). The post-ASP expansion cohort also consulted ID for more patients (2 vs. 12 consults in the pre- and post-expansion group, respectively; p=0.011). Patient and graft survival one year after transplantation were similar between the two cohorts (p=0.540 and p=0.255, respectively).

Conclusion: An expanded ASP contributed to a reduction in broad-spectrum antimicrobial use in post-liver transplant patients without negatively impacting patient and graft survival one year post-transplantation. These data provide further evidence of ASP benefits within immunocompromised populations.

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

205. Rectal Stool Surveillance Cultures to Guide Empiric Antibiotic Therapy in Patients with Hematologic Malignancies with or without Hematopoietic Stem Cell Transplantation

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Session: P-7. Antimicrobial Stewardship: Special Populations

Background: Patients with hematologic malignancies (HM) or hematopoietic stem cell transplant (HSCT) commonly receive broad-spectrum antimicrobials, often leading to the development of multidrug resistant organisms (MDRO). At our institution, rectal stool surveillance cultures (SSC) are done weekly on admitted adult patients with HMs or HSCT. The objective of this study is to determine the role of SSCs in predicting the development of a sterile site infection (StSI) with the same MDRO as identified in the SSC.

Methods: We retrospectively evaluated StSIs (blood, CSF, sputum/respiratory, pleural fluid, and urine) and SSC data from 242 adult patients admitted to the adult oncology ward at a large academic tertiary care center from 6/1/2017 to 2/28/2019. Demographics, SSC data, and StSIs in a 3-month period following the last SSC for each patient were collected from electronic medical records. SSCs were cultured on HardyCHROM ESBL™ media. MDRO similarity between SSC and StSI was determined by comparing susceptibility profiles. JMPO Pro 14.3.0 and RStudio were used for statistical analyses.

Results: Two hundred forty-two patients yielded 732 SSCs. We eliminated SSCs with incomplete (< 3 months of follow up) data. Thus, 579 SSCs were included in the analyses. 64% of patients were male. Leukemias (55.4%), lymphomas (21.9%), and multiple myeloma (10.3%) were the most common HMs. HSCT recipients comprised 50.4%. SSCs were positive for a MDRO in 251 cases (vancomycin-resistant enterococci, 52.2%; extended-spectrum beta-lactamase (ESBL) producing organisms, 22.2%; and carbapenamase producing organisms, 4.4%). There were 54 StSIs documented where the MDRO was the same as the SSC MDRO. The NPV of the SSC was 95.1% (95%CI 0.93,0.97). The positive likelihood ratio of the SSC was 2.5 (95%CI 2.07,3.02).

Conclusion: Our results suggest that a negative SSC is associated with a lower probability of identifying a StSI with an MDRO. Clinically, this can be useful in providing the opportunity to judiciously guide antimicrobial therapy, thereby avoiding the unnecessary usage of broad-spectrum antimicrobials when no MDRO is identified in the SSC.

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

206. The Utility of Lactate as a Biomarker for Sepsis in Cancer Patients

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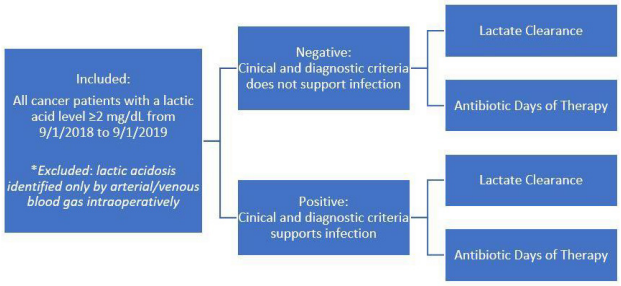
Session: P-7. Antimicrobial Stewardship: Special Populations

Background: Serum lactate is included in the initial assessment of patients with sepsis. However, cancer patients develop lactic acidosis for a variety of reasons and are underrepresented in most studies. Therefore, elevated lactate levels may lead to overdiagnosis of sepsis and excessive antibiotic use. The purpose of this study is to evaluate the utility of lactate as a biomarker for sepsis in cancer patients. The primary endpoint is the rate of 24-hour lactate clearance between infectious and non-infectious causes of lactic acidosis in cancer patients. Secondary objectives explore the duration of antibiotic therapy (DOT), the impact of liver metastasis on serum lactate levels, and the role of procalcitonin in distinguishing between infectious and non-infectious causes of lactic acidosis.

Methods: Retrospective chart review by Antimicrobial Stewardship team

Figure 1: Study design



Results: Preliminary data from a random subset of our sample (45/150) suggests there is no difference in mean serum lactate levels between infectious and non-infectious groups (4.6 vs 6.4). However, a substantial difference exists in the rate of 24h lactate clearance, although the difference was not statistically significant (58.3% vs 33%; p=0.13) (Fig2). There was a significant difference in antibiotic DOT (12.6 vs 3.3; p< 0.0001) presumably due to robust antimicrobial stewardship practices. Consistent with previous studies, there was a significant difference in procalcitonin levels between groups (27.2 vs 1.5, p=0.04).

A sub-analysis of non-infectious patients with liver metastasis revealed a statistically significant difference in the rate of lactate clearance (21% vs 61.5%, p=0.03) (Fig3) suggesting that liver involvement impacts lactate clearance. Antibiotic DOT were also longer in non-infectious patients with liver metastasis (4.53 vs 1.38, p=0.02).