Results. All had prolonged (median=24 days, range=9-210) and profound immunosuppression from chemotherapy and/or stem cell transplantation for acute myeloid leukemia (n=3) or lymphoma (n=2) at the time of culture positivity. Four were severely neutropenic (median=0.08/mm$^3$, range=0.01-0.26). Median patient age was 62 years (range=58-73). S. clavata was isolated from blood (n=3), urine (n=2), and liver (n=2) samples. Whole genome sequencing of these isolates was performed to confirm the presence of an outbreak. All patients received empirical treatment with intravenous caspofungin before culture-guided therapy with intravenous liposomal amphotericin B +/- oral flucytosine. Two of the five patients died although both had advanced refractory malignancies, treatment with antifungal agents, tinsel to tissues, drains, and vents in patient rooms and clean areas for handling of storage and food of medication failed to identify a clear point source despite isolation of multiple environmental organisms. No further cases have emerged after intensification of the cleaning regimen in these areas.

Conclusion. Our experience highlights the emerging threat of drug-resistant yeasts particularly in the immunocompromised. Management of such outbreaks requires a multidisciplinary approach incorporating antifungal stewardship, infection control, and environmental microbiology, alongside close clinical liaison between hematologists-oncologists and infection specialists.

Disclosures. All Authors: No reported disclosures

936. Risk Factors and Clinical Outcomes for Extended-Spectrum Beta-Lactamase Producing Enterobacterales Blood Stream Infections in Patients with Hematologic Malignancies

Amanda LeFemine, PharmD$^1$; Jacqueline Meredih, PharmD, BCPS, BCPP$^2$; Katie Hammer, Pharm.D., BCPS-AQ ID$^3$; Ekaterina Kachur, PharmD, BCOP$^4$; Jaxian He, M.S$^5$; Carly C. Spiegla$^6$; zainab shahid, MD$^7$; 1Attrium Health Carolinas Medical Center, Charlotte, North Carolina; 2Attrium Health, Carolinas Medical Center, Charlotte, North Carolina; 3Attrium Health, South Carolina; 4Glaxosmithkline, Fort Mill, South Carolina; 5Attrium Health-Levine Cancer Institute, Charlotte, North Carolina; 6University of North Carolina, Eshelman School of Pharmacy, Charlotte, North Carolina; 7Levine Cancer Institute, Charlotte, North Carolina

Session: P-53. Infections in Immunocompromised Individuals

Background. Hematologic malignancy patients have high rates of antibiotic exposure, and increasing resistance is a major concern, particularly with extended-spectrum beta lactamases (ESBL) in Enterobacterales blood stream infections (BSIs). Identifying risk factors for ESBL-producing Enterobacterales (ESBL-E) BSIs may facilitate faster appropriate antibiotic use and decrease mortality.

Methods. This was a retrospective study of patients with hematologic malignancies (e.g., Escherichia coli or Klebsiella pneumoniae bacteraemia admitted to Carolinas Medical Center in Charlotte, NC from January 2010 through September 2020. The primary objective was to compare 30-day mortality rates for patients with ESBL-E BSIs to those with non-ESBL-E BSIs. Fisher’s exact or Mann-Whitney U tests were used for primary and secondary clinical outcomes as appropriate. Risk factors associated with 30-day mortality and ESBL production were assessed as secondary objectives using logistic regression models.

Results. A total of 28 patients with ESBL-E BSIs and 60 patients with non-ESBL-E BSIs were included. The 30-day mortality rate with ESBL-E BSIs was 25% compared to 15% with non-ESBL-E BSIs (P = .373). In-hospital mortality, 30-day infection recurrence, intensive care unit (ICU) admission, and length of stay after culture were not significantly different. However, time to optimal therapy was longer in the ESBL-E group (median 42.3 vs 1.9 hr; P = .001). Multivariate logistic regression analysis showed an association of 30-day mortality with ICU admission (OR 16.7; 95% CI, 3.56-78.4; P < .001) and longer time to optimal therapy (OR 1.03; 95% CI, 1.01-1.05; P = .026). Prior ESBL-positive culture was associated with ESBL-E BSIs (OR 1.41; 95% CI, 1.00-1.93; P = .046). Additionally, prolonged neutropenia (OR 3.05; 95% CI, 1.01-9.23; P = .049) and prior intravenous antibiotic use (OR 2.96; 95% CI, 0.96-9.09; P = .059) were associated with ESBL-E BSIs in the multivariate analysis.

Conclusion. Significantly longer time to optimal therapy was seen in ESBL-E BSIs and was associated with mortality in patients with hematologic malignancies. The identified ESBL risk factors create an opportunity to decrease delay in optimal therapy through risk stratification during initial antibiotic selection.

Disclosures. Ekaterina Kachur, PharmD, BCOP; Bristol Myers Squibb (Advisor or Review Panel member); Kyowa Kirin (Advisor or Review Panel member)

937. A Clinical Prediction Tool to Determine Risk of Infection in the First Year Following Heart Transplant

Whitney Ferry, MD$^1$; Jennifer Chow, MD, M.S.$^1$; Jason Nelson, MPH$^2$; David Kent, MD, M.S.$^3$; David R. Snydman, MD$^4$; Division of Geographic Medicine and Infectious Diseases, Tufts Medical Center, Boston, MA; $^2$Predictive Analytics and Comparative Effectiveness (PACE) Center, Institute for Clinical Research and Health Policy Studies, Tufts Medical Center, Boston, MA; $^3$Tufts Medical Center, Boston, MA

Session: P-53. Infections in Immunocompromised Individuals

Background. Invasive infection is a dangerous complication of heart transplant (HT). No objectively-defined set of risk factors has been established which can reliably predict infection in this population. The aim of this study was to develop a clinical