Consultant, Consulting fee. Merck: Consultant, Scientific Advisor and Speaker's Bureau, Research support and Speaker honorarium.

190. Epidemiology and Risk Factors for Antifungal Resistance in Patients with Candidemia
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Background. Candida is a common nosocomial bloodstream pathogen associated with high mortality. Data on antifungal resistance from Saudi Arabia is scarce. The objective of this study is to examine epidemiology, risk factors for antifungal resistance, and outcome among patients with candidemia.

Methods. A retrospective study conducted at King Faisal Specialist Hospital and Research Center–Jeddah branch (KFSHRC).) The study included all patients 18 years and older with positive blood culture for candida over a 5-year period (2012–2016).

Results. We identified 92 cases of candidemia. The mean age was 59 years SD (18). Candida glabrata was the most prominent species 33 (36%) followed by Candida parapsilosis 22 (24%), Candida albicans 20 (22%), Candida tropicalis 13 (14%), Candida krusei 2 (2%), and others 2 (2%). Resistance to fluconazole was identified in 14 (15%) cases, four of them were also resistant to voriconazole. Among cases resistance to fluconazole, seven (7%) cases were C. parapsilosis, two (14%) of each C. glabrata, C. krusei, and C. Albicans and one (7%) was C. tropicalis. In univariate analysis, previous exposure to echinocandin and mechanical ventilation within 3 months were associated with fluconazole resistance candidemia 12 (13%) vs 1 (2%), (P = 0.007), 28 (36%) vs 10 (71%), (P = 0.014) respectively. Patients with fluconazole resistance candida had a longer length of intensive care unit stay (median 26 days (IQR 6–40) days and 12 days (IQR 7–36)), respectively. Length of hospital stay was longer in patients with fluconazole resistance compared with those without (median 83 days (IQR 29–199) days and 31 days (IQR 17–75)), respectively. Thirty-day mortality of patients fluconazole resistance compared with non-resistance cases was not significant 43 and 55%, respectively (P = 0.28).

Conclusion. In our cohort, Candida glabrata is the most common species causing candidemia. Increasing fluconazole resistance Candida parapsilosis is alarming. More regional epidemiological antifungal resistance studies are required to confirm this finding.

Disclosures. All authors: No reported disclosures.

191. Improved Survival of Candida CLABSI by Adherence to Standard of Care and Involvement of Infectious Diseases Consultant: A 5-Year Experience in a Single Academic Center
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Background. Candidemia is the fourth most common nosocomial blood stream infection with significant morbidity and mortality. Central lines have been considered a risk factor for invasive fungal infection. We evaluated the epidemiology, management, and outcome of Candidemia CLABSI in an academic medical center.

Methods. We conducted a retrospective cohort study in a single academic center from January 1, 2011 to December 31, 2016 of patients who had positive blood cultures for Candida sp. and met CDC criteria for CLABSI. Outcomes measured were 30-day mortality and relapse or recurrence. Descriptive statistics were used to compare the differences between the pre-group and the post-group.

Results. We identified 92 cases of candidemia. The mean age was 59 years SD (18.5). Candida glabrata was the most prominent species 33 (36%) followed by Candida parapsilosis 22 (24%), Candida albicans 20 (22%), Candida tropicalis 13 (14%), Candida krusei 2 (2%), and others 2 (2%). Resistance to fluconazole was identified in 14 (15%) cases, four of them were also resistant to voriconazole. Among cases resistance to fluconazole, seven (7%) cases were C. parapsilosis, two (14%) of each C. glabrata, C. krusei, and C. Albicans and one (7%) was C. tropicalis. In univariate analysis, previous exposure to echinocandin and mechanical ventilation within 3 months were associated with fluconazole resistance candidemia 12 (13%) vs 1 (2%), (P = 0.007), 28 (36%) vs 10 (71%), (P = 0.014) respectively. Patients with fluconazole resistance candida had a longer length of intensive care unit stay (median 26 days (IQR 6–40) days and 12 days (IQR 7–36)), respectively. Length of hospital stay was longer in patients with fluconazole resistance compared with those without (median 83 days (IQR 29–199) days and 31 days (IQR 17–75)), respectively. Thirty-day mortality of patients fluconazole resistance compared with non-resistance cases was not significant 43 and 55%, respectively (P = 0.28).

Conclusion. In our cohort, Candida glabrata is the most common species causing candidemia. Increasing fluconazole resistance Candida parapsilosis is alarming. More regional epidemiological antifungal resistance studies are required to confirm this finding.

Disclosures. All authors: No reported disclosures.

192. Treatment Bundle Improves Outcomes in the Management of Candidemia at Large Urban Academic Medical Center
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Background. A candidemia treatment bundle (CTB) may increase adherence to guideline recommended candidemia management and improve patient outcomes. The purpose of this study was to evaluate the impact of a best practice alert (BPA) and order-set on optimizing compliance with all CTB components and patient outcomes.

Methods. A single center, pre-/post-intervention study was completed at Grady Health System from August 2015 to August 2017. Post-CTB intervention began August 2016. The CTB included a BPA that fires for blood cultures positive for any Candida species to treatment clinicians upon opening the patient's electronic health record. The BPA included a linked order-set based on treatment recommendations including: infectious diseases (ID) and ophthalmology consultation, repeat blood cultures, empirical echinocandin therapy, early source control, antifungal de-escalation, intravenous to oral (IV to PO) switch, and duration of therapy. The primary outcome of the study was total adherence to the CTB. The secondary outcomes include adherence with the individual components of the CTB, 30-day mortality, and infection-related length of stay (ILOS).

Results. Forty-five patients in the pre-group and 24 patients in the CTB group with candidemia were identified. Twenty-seven patients in the pre-group and 19 patients in the CTB group met inclusion criteria. Total adherence with the CTB occurred in 28 cases in the pre-group and three patients in the CTB group (9% vs. 71%, P = 0.02). Source control occurred in three and 11 patients, respectively (11% vs. 58%, P < 0.001). The bundle comprised of empirical echinocandin (81% vs. 100%, P = 0.07), PO to IV switch (22% vs. 52%, P = 0.5) also improved in the CTB group. Repeat cultures and antifungal de-escalation were similar among groups. Thirty-day mortality decreased in the CTB group by 10% (26% vs. 16%, P = 0.48). Median ILOS decreased from 29 days in the pre-group to 22 days in the CTB group (P = 0.05).

Conclusion. The CTB, with a BPA and linked order-set, improved guideline recommended management of candidemia specifically increasing the rates of ID consultation and early source control. There were quantitative improvements in mortality and ILOS.

Disclosures. All authors: No reported disclosures.

193. Validation of an Empiric Candidemia Treatment Algorithm
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Background. Judicious use of echinocandin may limit the development of resistance in Candida species. Guidelines endorse the use of echinocandin as initial therapy in candidemia, with fluconazole as an alternate choice in select patients. We compared the ability of providers to predict the need for echinocandin therapy in Candida blood-stream infections to that of a proposed institutional treatment algorithm designed to optimize empiric antifungal use.

Methods. In this retrospective study (10/2015–10/2016), patients were included with positive blood culture isolated in ≥1 blood culture, without candidemia in the prior 14 days. The empiric treatment (the first antifungal prescribed for ≥24 hours after index blood culture draw) was considered “overly broad” if an echinocandin was administered to a fluconazole-susceptible isolate and “inappropriate” if fluconazole was administered to a fluconazole-non-susceptible isolate. An institutional algorithm was created recommending empiric echinocandin use based on the presence of ≥1 risk factors (Table 1). Provider choice and the recommended agent according to the algorithm were compared with the final fluconazole susceptibility of the organism.

Results. Among 65 episodes of candidemia, the majority of isolates were C. glabrata (Figure 1). Ninety-one percent of patients received non-azole therapy, primarily miconafungin. Fluconazole was recommended by the algorithm in 25% of cases but initially prescribed in only 9% (Figure 2). Providers prescribed both oral and broad over initial and treatment at 4% and ophthalmology consultation (81% vs. 95%, P = 0.37) at day 1.

Conclusion. An algorithm using risk factors for fluconazole-non-susceptible Candida was able to predict appropriate empiric antifungal therapy better than provider decision making in cases of candidemia. Implementation of this algorithm into local treatment guidelines may improve empiric antifungal prescribing.