

stays, and increased healthcare costs. This study aims to evaluate current practices of candidemia management and review associated clinical outcomes to identify potential targets for antifungal stewardship.

**Methods.** A retrospective chart review of all patients with a positive blood culture for *Candida* spp. between July 2016 and June 2017 was conducted at a large academic medical center. The primary endpoint was time to effective therapy, defined as time from first positive blood culture to start of an antifungal with *in vitro* susceptibility. Secondary endpoints were time to clearance of candidemia and 30-day all-cause mortality. Data analysis was conducted and reported using descriptive statistics.

**Results.** A total of 36 patients with candidemia were included, a majority of whom were consulted by the Infectious Diseases (ID) team (81%). *C. albicans* and *C. parapsilosis* were the most common pathogens (36% and 25%, respectively) and sources of candidemia varied, with the most common being a line-related source (42%). Median time to effective therapy was 0.3 hours (IQR 0.12–9.95). Sixty-four percent of patients received a nonazole, primarily caspofungin, and 36% of patients received an azole as empiric antifungal therapy. Selection of empiric fluconazole was deemed suboptimal for 17% of patients, all of whom received delayed or no ID consult. Significantly more ID consult patients received an ophthalmology consult vs. non-ID consult patients (65% vs. 0%,  $P = 0.002$ ). Additionally, echocardiograms were more frequent in ID consult vs. non-ID consult patients (52% vs. 29%,  $P = 0.408$ ). Median time to candidemia clearance was 58 hours (IQR 46.4–95.6) and 30-day all-cause mortality was 25%.

**Conclusion.** Most patients were started on effective antifungal therapy once candidemia was identified. Patients with an ID consult were more likely to receive ophthalmology consults or echocardiograms to rule out optic or cardiac involvement, respectively. Antifungal stewardship efforts geared toward establishment of institutional guidelines, candidemia treatment bundles, or mandatory ID consult may be considered to improve current practices of candidemia management.

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

### 375. Tolerability of Anidulafungin for Candidemia in Patients With Hepatic or Renal Dysfunction

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**Session:** 56. Fungal Disease: Management and Outcomes

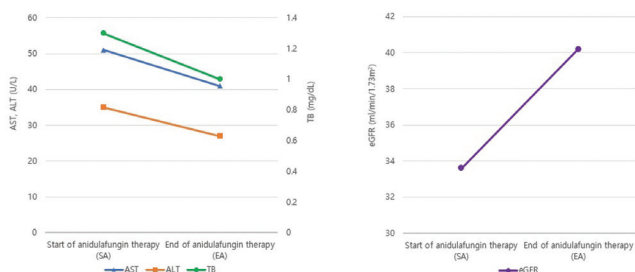
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**Background.** Anidulafungin has been prescribed in patients with candidemia, especially hepatic or renal dysfunction because of not undergoing metabolism in the liver and kidney. The purpose of this study was to evaluate the safety of anidulafungin in these patient populations.

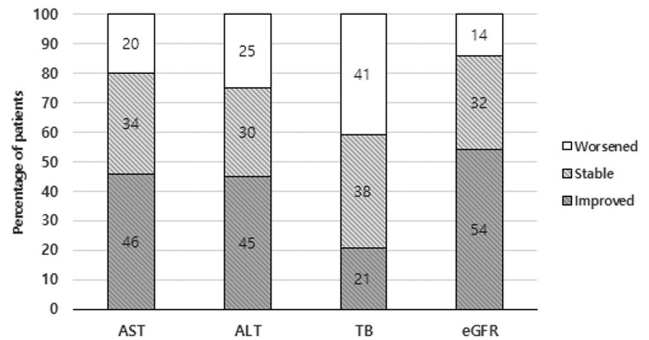
**Methods.** We retrospectively reviewed the electronic medical records of candidemia in 146 patients who were treated with anidulafungin for more than 7 days at Dong-A University Hospital from January 2012 to December 2017. We evaluated changes in AST, ALT, and total bilirubin (TB) between the start and end of anidulafungin therapy, and change in estimated GFR (eGFR), calculated by the Modification of Diet in Renal Disease (MDRD) study equations.

**Results.** There were 101 patients with impaired liver function at the start of anidulafungin therapy (group A) and 57 with renal insufficiency (group B). In group A, 61 (60%) were male and the median age was 69 (20–88) years. The patients had solid tumor (51, 50%) and 26 (26%) were with liver disease. According to the Child-Pugh score, 54 (53%) patients were class B and five (5%) were class C. The median changes in AST, ALT, and TB during anidulafungin therapy were  $-10$  U/L,  $-8$  U/L,  $-0.3$  mg/dL ( $P = 0.023$ ,  $P = 0.008$ ,  $P = 0.013$ ), respectively (Figure 1A). In group B, 35 (61%) were male and the median age was 71 (20–88) years. There were 21 (37%) patients with solid tumor and 30 (53%) had kidney disease. The median change of eGFR was  $+6.6$  mL/minute/1.73 m<sup>2</sup> ( $P < 0.001$ ) (Figure 1B). Over 75% (ALT, AST, eGFR) and nearly 60% (TB) of patients had favorable changes (values were stable or improved) in hepatic or renal function during the anidulafungin therapy (Figure 2).

**Conclusion.** Anidulafungin was tolerable for the treatment of candidemia in patients with hepatic or renal damage.



**Figure 1.** Change of median values between SA and EA. (A) AST, ALT and TB. (B) eGFR. INSERT OFIDIS\_ofy210\_f0122.tif



**Figure 2.** Proportion of change patterns of AST, ALT, TB, and eGFR between SA and EA.

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

### 376. Predictive Model for Fluconazole Resistance in Patient With Candida Bloodstream Infection

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**Background.** Candida bloodstream infection (CBSI) is associated with high morbidity and mortality. Guidelines recommend echinocandins as initial therapy, with fluconazole as an acceptable alternative in selected patients, including those at low risk for fluconazole resistance. We aimed to create a predictive model to identify patient at high risk of fluconazole resistance.

**Methods.** We performed a retrospective analysis of hospitalized patients with CBSI at a large tertiary referral hospital between January 2007 and January 2015. Data were collected on demographics, comorbidities, medications, procedures, central lines, vital signs, and laboratory values. Univariate and multivariable logistic regression analyses were used to build the predictive model. Variables with  $P < 0.25$  were considered for the multivariable analysis, and only those that remain significant ( $P < 0.05$ ) were retained in the final model.

**Results.** We identified 1,083 patients with CBSI, of whom 684 patients had azole susceptibility data available. Among cases with available resistance data, *C. glabrata* was the most common species isolated, occurring in 240 cases (38%), followed by *C. parapsilosis*, 176 cases (25.7%), and *C. albicans*, 121 cases (17.6%). One hundred thirty-nine isolates were found to have fluconazole resistance (*C. glabrata* 55, *C. krusei* 36). Eighty-three variables were considered in the multivariable analysis; nine remained significant and were included in our final model. Variables associated with a higher risk of fluconazole resistance were: hematological cancer (OR 1.69 [95% CI 1.03, 2.79]), presence of an indwelling line (2.00 [1.30, 3.10]), prior fluconazole use (2.46 [1.32, 4.56]), prior voriconazole use (10.89 [1.18, 99.84]), prior calcineurin inhibitor use (2.65 [1.24, 5.66]), prior nitroimidazole use (1.63 [1.01, 2.64]), and prior tetracycline use (4.77 [1.96, 11.64]). Isolation of *C. parapsilosis* (0.20 [0.10, 0.39]), and chronic pulmonary disease (0.43 [0.21, 0.87]) were associated with a lower risk of resistance. The final model had a C-statistic of 0.75.

**Conclusion.** We identified nine risk factors that were significantly associated with fluconazole resistance. By creating a predictive model, patients at higher or lower risk for resistance may be identified earlier which may assist in the choice of initial antifungal treatment.

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

### 377. High Resistance and Mortality Rates in Patients With Ventricular Assist Device (VAD)-Associated Candidemia: A Need for Alternative Antifungal Strategies

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Thursday, October 4, 2018: 12:30 PM

**Background.** VADs are increasingly utilized in the management of end-stage heart disease. Infections are frequently encountered in VAD patients, are difficult to manage, and delay heart transplant. Prior studies have illustrated that fungal infections are rarer than bacterial infections but carry a higher mortality rate. Published data regarding the treatment and outcomes of fungal infections in VAD patients are scarce. The objective of this study was to describe treatment patterns, clinical outcomes and antifungal resistance rates in this unique patient population.

**Methods.** This was a retrospective cohort study that included VAD patients 18 years and older admitted to Baylor St. Luke's Medical Center in Houston, Texas between 2009 and 2016 with a positive blood culture for *Candida* spp. Patients with