Candida albicans is the most frequently isolated species worldwide. However, species distribution, epidemiology, and resistance have changed. *C. parapsilosis* complex (CPC), which has a global rate of fluconazole (FCZ) resistance range between 2% and 5% and has been related to echinocandin resistance, is the second most isolated species at Fundación Valle del Lili (FVL). We aim to describe the clinical and microbiological characteristics of fungal infections by *C. parapsilosis* and determine FCZ resistance rates.

**Methods.** An observational prospective study was conducted. The study included patients with CPC isolations attended at FVL from 2016 to 2017. The strains were identified by mass spectrometry (MALDI TOF Bruker, Biotyper 3.1). Minimal inhibitory concentrations (MICs) were determined by broth microdilution (M27-A CLSI). Statistical univariate analysis was performed; Differences between resistant cases and nonresistant cases were assessed through U Mann-Whitney test. Pearson chi-squared test or Fisher exact test.

**Results.** 55 patients had CPC isolations during the study period: 18 newborns, 13 children, and 24 adults. Most isolations were from blood cultures (n = 31) (14 of them newborns), bronchoalveolar lavage (n = 9), peritoneal fluid (n = 8), and catheter tips (n = 3). The resistance was 36%. 52 strains were *C. parapsilosis* sp., of them, 20 were FCZ resistant; 3 strains were *C. orthopsilosis*, all of them FCZ sensitive. The MIC50 = 1 μg/mL and MIC90 = 16 μg/mL. Patients with previous antifungal treatment had a higher risk of FCZ resistance (RR: 2.14, 95% CI 1.07–4.26). The mortality crude rate was 30%, patients with diabetes and renal failure death rate (RR: 3.1, 95% CI 1.4–6.9) and (RR: 2.96, 95% CI 1.4–6.4), respectively. Candidemia was present in 50% of deaths among children with parenteral nutrition.

**Conclusion.** Fluconazole resistance in CPC has increased in the last decade. Newborns receiving parenteral nutrition had a higher proportion of CPC fungemia; we also found higher mortality rates among this population.

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

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**1696. Epidemiology, Clinical Characteristics and Outcomes of Invasive Aspergillosis in a Tertiary Care Hospital in Mexico**

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**Session:** 165. Mycology

**Friday, October 4, 2019: 12:15 PM**

**Background.** Invasive aspergillosis is an important cause of life-threatening infection in immunocompromised patients. The objective was to describe the epidemiology, clinical characteristics, and outcome of patients with invasive aspergillosis (IA) in a tertiary care center in Mexico.

**Methods.** A laboratory-based survey was done to identify patients with positive Aspergillus culture or galactomannan from 2014 to 2018. The medical records were reviewed to include patients with proven and probable IA, according to the EORTC criteria. Descriptive analysis of clinical characteristics and risk factors for 6-week mortality was made through X2, T-test or Mann–Whitney test. A multivariate logistic regression model including variables with a P-value of <0.2 in univariate analysis was made.

**Results.** 240 cases of IA were identified: 193 (80%) probable, 27 (11%) proven, 18 (7.5%) probable and 27 (11%) proven. Among patients with IA, 183 (82%) had a positive galactomannan and 109 (45%) had a culture with Aspergillus. Eleven had >1 species: 55/120 Donahue; 14/18 Donahue, 14/18 = Donahue cns; 18/15 (15%) A. niger and 18/15 (15%) A. flavus. Pulmonary disease occurred in 214 (89%). 212 patients (88%) received antifungal treatment with a median duration of 42 days (IQR 20–42). 129 (61%) received voriconazole (VRC). 20 (8.3%) Amphotericin B and 20 (8.3%) were randomized to a posaconazol vs. VRC trial. Six-week mortality was 35% (n = 85). Lymphopenia (OR 3.6; 95% CI 1.4–9.0), liver failure (OR 3.3; 95% CI 1.7–6.5) and older age (OR 1.03; 95% CI 1.01–1.05) (marginally) were independently associated with increased 6-week mortality.

**Conclusion.** 240 patients with IA were identified in a 5-year period in a tertiary care center. Most had hematological neoplasms and low prevalence of antimald prophylaxis due to economical reasons. Six-week mortality was 35%, nonsurvivors had liver failure and lymphopenia more often. Increased awareness to prevent IA is needed.

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

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**1697. Comparison of Candidemia in Patients in Neonatal Intensive Care Unit and Pediatric Patients and Big Data Analysis on Candidiasis and Candidemia in Korean Children**

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**Session:** 165. Mycology

**Friday, October 4, 2019: 12:15 PM**

**Background.** Fungal infection is a serious health threat in high-risk pediatric population. Data on pediatric epidemiology of candidiasis in Korea are limited.

**Methods.** A retrospective chart review was performed in patients aged 0–18 years who were diagnosed with candidemia from 2009 to 2018 in a tertiary teaching hospital. Patients were divided into two groups: the neonatal group was comprised of babies with a postnatal age 28 days or younger and any patients hospitalized in neonatal intensive care unit and rest of the patients were grouped into pediatrics group. Only the first candidemia episode for each patient was included. In addition, the number of patients with candidemia and candidiasis and health cost was estimated among patients 19 years or younger who requested reimbursement to Health Insurance Review and Assessment Service (HIRA) Korea during the 9-year period from 2010 to 2018.

**Results.** Total 81 patients with candidemia were identified; 42 in the neonatal group and 39 in the pediatric group. In neonatal group, prematurity was 95.2%, while hematology-oncology diseases were the most common underlying conditions in pediatric group. A strong coupled Candida spp. *C. parapsilosis* was the most common pathogen (34.6%) followed by *C. albicans* (32.1%) and *C. glabrata* and *C. tropicalis* (11.1%, respectively). In neonatal group, *C. parapsilosis* (n = 17, 40.5%), *C. albicans* (n = 16, 38.1%), *C. glabrata* (n = 5, 11.9%) and unidentified species non-albicans candida (n = 1, 2.4%) were isolated. In pediatric group, *C. parapsilosis* (n = 11, 28.2%), *C. albicans* (n = 10, 25.6%), *C. tropicalis* (n = 4, 10.3%), *C. krusei* (n = 2), *C. orthopsilosis* (n = 1), *C. lusitaniae* (n = 1) were isolated. From HIRA data analysis, 47 patients were found to have candidemia and health cost was estimated as 1.17 million dollars and 66,286 patients were found to have candidiasis and health cost was 2.14 million dollars.

**Conclusion.** Discrepancies in numbers for candidemia between national reimbursement data and our retrospective data implies a significant underestimation of candidemia in Korea. Increased awareness for fungal infection documentation is needed to better estimate the true burden of invasive candida infection in the pediatric population.

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