1152. Characteristics of Patients with Invasive Infections Caused by Trichosporon asahii

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Background. *Trichosporon asahii* is main species for invasive infection by genus *Trichosporon*. There has been few data regarding the incidence, clinical characteristics, and treatment outcomes of *T. asahii* colonization and invasive infection.

Methods. We retrospectively reviewed the microbiological records of patients whose culture results were positive for *T. asahii*, from a tertiary hospital in South Korea between January 2009 and July 2018. Invasive disease was defined according to the consensus statement of the Invasive Fungal Infections Cooperative Group of the European Organization for Research and Treatment of Cancer and the Mycoses Study Group (EORTC-MSG).

Results. During the study period, a total of 259 clinical *T. asahii* isolates (137 urine, 55 respiratory specimen, 26 blood, 16 surgical site drainage, 9 tissue biopsy, 9 open discharge, 3 toe/nail, 2 pleural fluid and 2 stool) were collected from 102 patients. Of the 102 patients, 18 (18%) had invasive infection: fungemia (12 [67%]), complicated skin and soft tissue infection (3 [17%]), pneumonia with or without empyema (2 [11%]), and complicated intra-abdominal infection (1 [5%]). Invasive infection was associated with hematologic malignancy (33% vs. 7%, P=0.006), end stage renal disease requiring dialysis (28% vs. 7%, P=0.02), indwelling central venous catheter (94% vs. 54%, P =0.001), and prior antifungal agent use (50% vs. 18%, P=0.01). Invasive group had significantly higher in-hospital mortality than non-invasive group (61% vs. 27%, P = 0.006).

Characteristics of 102 patients with invasive and non-invasive Trichosporon asahii disease

Table 1. Characteristics of 102 patients with invasive and non-invasive *Trichosporon asahii* disease

	Invasive (n=18)	Non-invasive (n=84)	P value
Age, median (IQR)	55 (45-72)	61 (51-74)	0.21
Male	13 (72)	54 (64)	0.52
Underlying disease and condition			
Diabetes mellitus	4 (22)	17 (20)	1.00
Hematologic malignancy	6 (33)	6 (7)	**0.006**
End stage renal disease requiring dialysis	5 (28)	6 (7)	**0.02**
Solid organ transplant recipient	4 (22)	6 (7)	**0.07**
Liver cirrhosis	3 (17)	6 (7)	0.19
Neutropenia	3 (17)	3 (4)	**0.07**
Solid tumor	4 (22)	21 (25)	1.00
Indwelling of central venous catheter	17 (94)	45 (54)	**0.001**
Type of infection			
Fungemia	12 (67)	NA	
Complicated skin and soft tissue infection	3 (17)	NA	
Pneumonia with or without empyema	2 (11)	NA	
Complicated intra-abdominal infection	1 (5)	NA	
Concurrent candidemia	1 (6)	5 (6)	1.00
Staying in intensive care unit	14 (78)	49 (58)	0.12
Prior antibiotics use within 30 days	18 (100)	74 (88)	0.20
Prior antifungal agent use within 30 days	9 (50)	15 (18)	**0.01**
Fluconazole	2 (11)	4 (5)	1.00
Itraconazole	2 (11)	2 (2)	0.62
Voriconazole	0 (0)	4 (5)	0.26
Echinocandin	3 (17)	1 (1)	0.13
Liposomal amphotericin B	2 (11)	3 (4)	1.00
Amphotericin B	0 (0)	1 (1)	1.00
In-hospital mortality	11 (61)	23 (27)	**0.006**

Data in parentheses are percentages (%) of patients unless otherwise indicated.

Abbreviation: IQR, interquartile range

Conclusion. Invasive infection was associated with hematologic malignancy, end stage renal disease, indwelling of central venous catheter, and prior antifungal agent use, and high mortality up to 60%. Those with above risk factors should be monitored for development of invasive *T. asahii* infection.

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1153. Characterization of Invasive Mold Infections in Acute Leukemia and Hematopoietic Stem Cell Transplant Recipient Patients and Risk Factors for Mortality - a Single Center Experience

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Background. Invasive mold infections (IMIs) remain a significant cause of morbidity and mortality in patients with acute leukemia (AL) and those undergoing hematopoietic stem cell transplantation (HSCT). We describe the epidemiology of IMIs, the incidence of IMI in patients with acute myelogenous Leukemia (AML) post HSCT, and risk factors for mortality.

Methods. Patients were identified using ICD9 and ICD10 codes using a University of Kansas internal database from 2009-2019, microbiology records, and an AML HSCT database and were followed through May 1st, 2020. Patients' electronic medical records were reviewed for inclusion. IMI was defined as proven or probable using the 2009 National Institute of Allergy and Infectious Diseases Mycoses Study Group (MSG) guidelines. Incidence was calculated as IMI cases/100-person-years. Risk factors for overall mortality were evaluated using a Cox regression model.

Results. We included 138 patients: 79 developed IMI after HSCT (8 autologous, 71 allogeneic) and 59 developed IMI after AL diagnosis. Seventeen of the AL patients underwent HSCT after IMI diagnosis (12 within 100 days of IMI). Proven IMI occurred in 45 (32.6%) and probable IMI occurred in 93 (67.4%) patients. The most common prophylactic agent prior to IMI diagnosis was fluconazole (31.2%), with 21.0% receiving none. Aspergillus was the most commonly identified mold with 91 (65.9%) cases. The average treatment duration was 101 (range 0 - 799) days. The incidence of IMI in patients with AML who underwent HSCT was 2.35 cases/100 person-years. All-cause mortality among patients with AL or HSCT who developed IMI was 23.1% at 6 weeks, 34.1% at 12 weeks, and 61.2% at 1 year. On univariate Cox model, Karnofsky performance status > 70 was associated with lower mortality (hazard ratio (HR) 0.317, 95% confidence interval (CI) [0.110, 0.914]) among HSCT recipients. ICU admission within 7 days prior to IMI diagnosis (HR 6.469, 95% CI [1.779, 23.530]) and each one point increase in BMI (HR 1.051, CI [1.001, 1.103]) were associated with increased mortality in the AL group.

Figure 1 - Invasive mold infections by pathogen in HSCT-recipients and acute leukemia patients from 2009-2019.

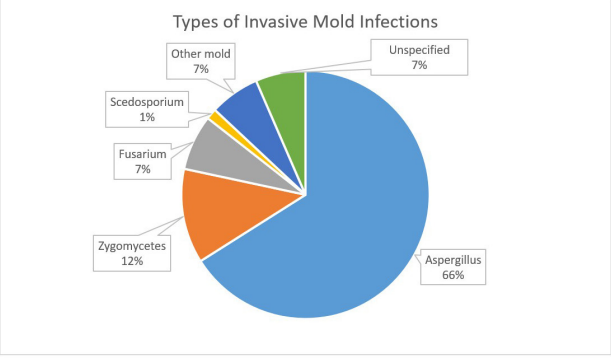

Figure 2 - Antifungal prophylactic agents prescribed for at least one week at time of IMI diagnosis

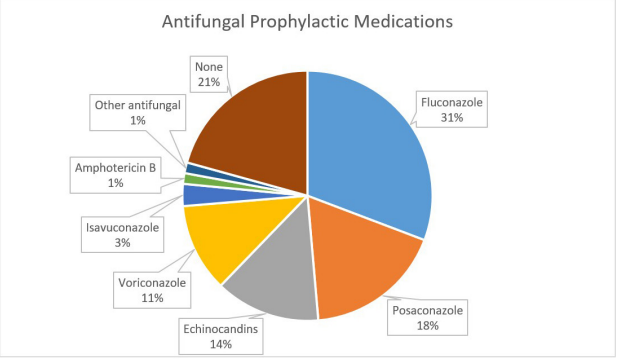

Table 1 - Univariate survival analysis calculated using a Cox proportional-hazards regression model among patients who developed IMI after HSCT and patients who developed IMI after acute leukemia diagnosis

	Hazard Ratio	95% CI	p-value
HSCT Group			
Age >55	0.399	[0.145, 1.098]	0.075
Male sex	1.839	[0.524, 6.455]	0.342
BMI (continuous)	0.916	[0.926, 1.016]	0.613
Neutropenia	0.680	[0.194, 2.387]	0.741
ICU admission in 7 days prior to IMI diagnosis	1.839	[0.524, 6.456]	0.342
Karnofsky performance score ≥ 70	0.317	[0.110, 0.914]	0.033
CMV reactivation	0.324	[0.074, 1.426]	0.136
Active graft versus host disease	1.344	[0.488, 3.698]	0.567
Acute Leukemia Group			
Age >55	1.630	[0.460, 5.778]	0.449
Male sex	1.338	[0.426, 4.205]	0.618
BMI (continuous)	1.051	[1.001, 1.103]	0.047
Neutropenia	1.488	[0.336, 6.595]	0.601
ICU admission in 7 days prior to IMI diagnosis	6.469	[1.779, 23.530]	0.005
Karnofsky performance score ≥ 70	0.310	[0.038, 2.518]	0.273

Conclusion. IMIs are associated with significant mortality in HSCT recipients and AL patients; patients at higher risk for mortality include those with lower baseline Karnofsky scores, recent ICU admissions, and higher BMI at time of IMI diagnosis.

Disclosures. **Wissam El Atrouni, MD**, **ViiV** (Advisor or Review Panel member)

1154. Characterizing fungemic outcomes among adult inpatients at a community teaching hospital: a retrospective cohort study

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Background. Fungemia is among the highest causes of mortality and length of stay (LOS) within the inpatient setting. We aim to characterize outcomes in adult inpatients with fungemia at our institution.

Methods. Adult inpatients with at least one positive blood culture with yeast between January 1st, 2017 and December 31st, 2018 were retrospectively identified via an electronic health record report. Outcome measurements were stratified into three categories: demographic, infectious, and antifungal-related.

Results. Forty-five patients were identified for review. The mean age was 62 years (SD 16.8) while the prevalence of fungemia among men and women was comparable (48.9 versus 51.1%). Diabetes (24.4%) and past malignancy (22.2%) were among the top comorbidities. One in five patients received total parenteral nutrition at the time of positive blood culture results. Central lines were present in 66.7% of patients and were implicated as the source of infection in the majority of cases (31%). Intensive care unit (ICU) admission, 30-day mortality, and 30-day hospital readmission occurred in 66.7%, 24.4%, and 26.7% of patients, respectively. The median time to culture positivity and time to antifungal therapy after positive culture results were 42.5 (IQR 36.5 - 63) and 6.5 hours (IQR 2.75 - 12.5), respectively. *Candida albicans* was found to be the primary fungal pathogen identified among cases reviewed, isolated in 53.3% of patients. ID consultation occurred in 86.7% of cases. Caspofungin was the predominant empiric antifungal agent prescribed (50.8%). Median total duration of therapy was 14 days (IQR 11.5 - 19).

Conclusion. This analysis successfully identified key high-risk areas of attention in the clinical management of adult inpatients with fungemia at our institution. Central lines and ICU admission were predominant characteristics identified, suggesting the complexity of the management of these patients. Although 30-day mortality and readmission rates were found to mirror current national averages for this population, further risk-assessment of these outcomes would be appropriate to evaluate in a larger study cohort.

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1155. Clinical and Epidemiological Characteristics of Patients with Paracoccidioidomycosis in Asuncion Paraguay

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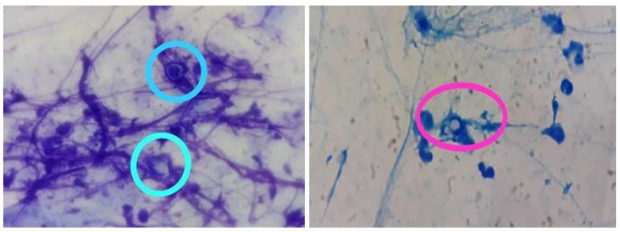
Background. Paracoccidioidomycosis (PCM) is an endemic systemic fungal disease caused by *Paracoccidioides brasiliensis*. It is obtained exclusively in Latin American countries, and presents with a greater prevalence in South America. It is acquired through inhalation and spreads by lympho-hematogenous dissemination. Once the fungus has established itself in the body, it can affect any organ or tissue, but most commonly the skin, mucous membranes and lungs. It is a neglected disease, without mandatory notification, its impact is unknown.

Methods. Descriptive, observational, retro-prospective study with analytical components, The patients were adults (>18 years), diagnosed with paracoccidioidomycosis who were hospitalized at the Instituto De Medicina Tropical Asunción-Paraguay during 2010-2019.

Results. There were 33 patients included in this study. Most patients were male (90%) and 10% were female, the mean age of 48. The main reason for consult was: oral lesion(s) (21%), difficulty swallowing (15%), and skin lesions (15%). The geographic regions with the highest prevalence rates (Fig1) were: Central, Cordillera and Caaguazú. The major risk factors for acquiring Paracoccidioidomycosis were farming (51%), smokers (66%) and alcoholism (42%). Only one patient was co-infected with HIV. The diagnosis was made either by culture or by biopsy results (Fig 2). All the patients were started on treatment with amphotericin B deoxycholate, with an average dose of 1,020 mg for induction and continued maintenance treatment with imidazoles. The mortality rate was 9.09%. The outpatient clinic follow up was low at 15% and 12 patients (80%) were treated successfully.

Figure 1: Paraguay Coutnry Map showing the most affected areas with Paracoccidioidomycosis.

Figure 2: Culture result.



Conclusion. This study suggests that paracoccidioidomycosis mainly affects men, farmers, associated with high tobacco consumption in Paraguay. Common clinical manifestations were oral lesion, skin lesions, and difficulty swallowing. There are no current IDSA guidelines for treatment thus we use the national Paraguayan treatment guidelines. This study highlights the need to further study PCM and establish global guidelines.

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

1156. Clinical and epidemiological features and outcomes of Blastomycosis in a tertiary hospital in Kentucky

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