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

Jinyeong Kim, MD[1]; Min Jae Kim, MD[2]; Yong Pil Chong, MD[2]; Sung-Han Kim, PhD[2]; Sang-Ho Choi, MD[2]; Sang-Oh Lee, MD[2]; Jun Hee Woo, PhD[2]; Yang Soo Kim, MD[2]; Jiwon Jung, MD[2]; [1]Asan medical center, Seoul, Seoul-t'ukpyolsi, Republic of Korea [2]Asan Medical Center, Songpa-gu, Seoul-t'ukpyolsi, Republic of Korea

Session: P-52. Medical Mycology

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.

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

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

Ryan Kubat, DO[1]; Praveen Subramanian, DO[1]; Yanming Li, PhD[1]; Kassem Hammoud, MD[1]; Albert Eid, MD[1]; Ajoy Dias, MD[2]; Wissam El Atrouni, MD[1]; [1]University of Kansas Medical Center, Kansas City, KS; [2]Beth Israel Deaconess Medical Center, Boston, Massachusetts

Session: P-52. Medical Mycology

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.

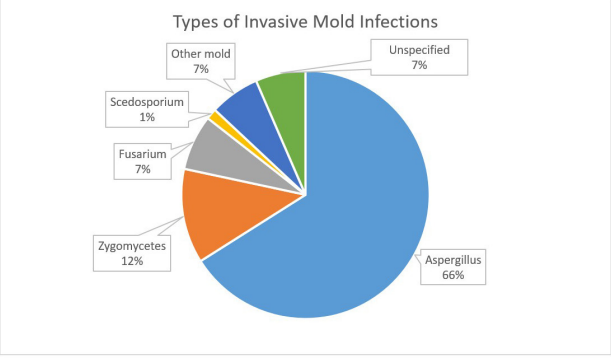

Figure 2 - Antifungal prophylactic agents prescribed for at least one week at time of IMI diagnosis