

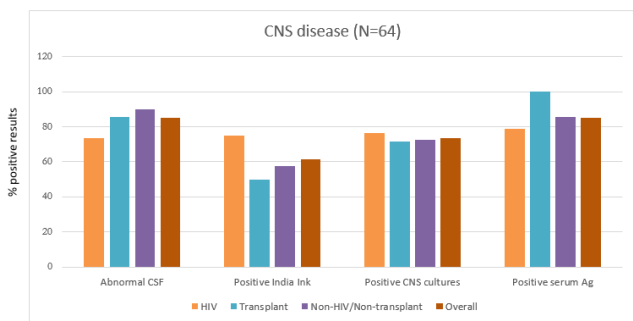
Table 1: Cryptococcal presentation and infectious disease testing by patient risk groups

	HIV-infected patients	Solid organ Transplant recipients	Non-HIV/non-Transplant patients	Total	p-value
Meningitis (%)	17/23 (73.9)	7/11 (63.6)	40/80 (50)	64/114 (56.1)	0.11
Isolated pulmonary disease (%)	2/23 (8.7)	4/11 (36.4)	25/80 (31.3)	31/114 (27.2)	< 0.01
Antigenemia or fungemia without meningitis or pneumonia (%)	4/23 (17.4)	0/11 (0)	15/80 (18.8)	19/114 (16.7)	0.37
Cirrhosis/liver disease (%)	4/23 (17.4)	4/11 (36.4)	27/80 (33.8)	35/114 (30.7)	0.33
Positive blood culture (%)	11/21 (52.4)	3/11 (27.3)	22/74 (29.7)	36/106 (34)	0.15
Positive serum Ag (%)	16/20 (80)	7/9 (77.8)	40/61 (65.6)	63/90 (70)	0.46
Inpatient mortality (%)	6/23 (26.1)	6/11 (54.5)	22/80 (27.5)	34/114 (29.8)	0.17

Table 2: Results of diagnostic testing for cryptococcal meningitis in three patient groups

	HIV-infected patients	Solid organ Transplant recipients	Non-HIV/non-Transplant patients	Total
Abnormal CSF WBC, protein, and/or glucose (%)	11/15 (73.3)	6/7 (85.7)	35/39 (89.7)	52/61 (85.3)
Positive India Ink (%)	12/16 (75)	3/6 (50)	23/40 (57.5)	38/62 (61.3)
Positive CNS cultures (%)	13/17 (76.5)	5/7 (71.4)	29/40 (72.5)	47/64 (73.4)
Positive serum Ag (%)	11/14 (78.6)	5/5 (100)	24/28 (85.7)	40/47 (85.1)
Positive CSF Ag if culture is also positive (%)	12/12 (100)	3/4 (75)	28/29 (96.5)	43/45 (95.6)

Figure 1: Percent positive test results by patient group for cryptococcal meningitis



Disclosures. All authors: No reported disclosures.

1706. Use of Management Bundles as a Checklist for Candidemia: Impact of Compliance on Clinical Outcomes in a Multicenter Study in Japan

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Background. We previously developed management bundles for candidemia and beneficial effects on clinical outcomes were shown in compliant patients (JAC 2015). However, there is a risk for bias because some elements cannot be achieved in patients who have an early death.

Methods. Patients with candidemia who were treated at six medical centers between 2015 and 2017 were prospectively evaluated. Bundle elements consisted of removal of central venous catheters within 24 hours, initial appropriate selection and dosing of antifungals, an ophthalmological examination, follow-up blood cultures, consideration of alternative antifungals on the 3rd to 5th days, and at least 2 weeks of therapy. To exclude bias by early death, we investigated the clinical results in patients who survived ≥ 2 weeks.

Results. Among 221 patients with candidemia, 190 patients were analyzed (31 patients were excluded because of early death). Clinical success and the 28-day mortality rate were 77.4% (171/221) and 22.2% (49/221) in all patients with candidemia and 88.9% (167/190) and 9.5% (18/190) in eligible patients, respectively. Compliance in achieving all bundle elements was accomplished in 67.9% of eligible patients. In multivariate analysis, compliance with the bundles was an independent factor for

28-day mortality (4.7% vs. 19.7%, odds ratio 0.19, 95% confidence interval 0.05–0.63). However, compliance did not affect clinical success (92.2% vs. 82.0%, odds ratio 2.13, 95% CI 0.77–5.86). Non-*Candida albicans*, disseminated candidiasis, and total parenteral nutrition were independent factors for poor clinical success. Severe severity and total parenteral nutrition were independent factors for 28-day mortality.

Conclusion. With prospective use of bundles as a checklist in patients with candidemia, compliance has a beneficial effect on clinical outcomes. This research was supported by AMED (JP18fk0108045).

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1707. Invasive Pulmonary Aspergillosis in Patients with Severe Fever with Thrombocytopenia Syndrome

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Background. Severe fever with thrombocytopenia syndrome (SFTS) is an emerging tick-borne disease often accompanied by immune catastrophic course and subsequent fatal outcome. More than 90% of patients with SFTS had leukopenia and about one-third of those need the admission of intensive care unit (ICU) during the hospital course. So, there has been growing concern about the complications such as invasive pulmonary aspergillosis (IPA) in critical SFTS patients. We thus investigate the incidence and clinical characteristics of IPA in patients with SFTS.

Methods. All patients who were confirmed as SFTS in a tertiary care hospital, Seoul, South Korea, between January 2013 and October 2018 were enrolled. The modified AspICU algorithm was used to identify cases of putative invasive pulmonary aspergillosis (PIPA) and discriminate these invasive diseases from colonization.

Results. Of the 45 PCR-confirmed SFTS patients, 16 (36%) received ICU care. Of these 16 patients, 9 (56%) developed PIPA during hospitalization. The median duration from admission to the first evidence of PIPA was 8 days (range, 2–11 days). None of the PIPA cases met the revised EORTC/MSG criterion. Septic shock and corticosteroid administration preceded more frequently in PIPA group than non-PIPA group (100% vs. 19%, $P < 0.0001$ and 67% vs. 14%, $P = 0.003$, respectively). Patients complicated by PIPA showed significantly higher mortality than non-PIPA patients (44% vs. 8%, $P = 0.048$ by log-rank test). Mortality was lower in patients with PIPA who received antifungal treatment (17% [1/6]) than in those with PIPA who did not (100% [3/3]) (log-rank test, $P = 0.002$).

Conclusion. More than half of patients with SFTS in ICU were complicated by IPA during early hospital course. Cautious scrutiny for IPA in patients with SFTS followed by early appropriate antifungal therapy for IPA is needed.

Table 1. Demographic and clinical characteristics of SFTS patients

Variables	Total (n=45)	PIPA (n=9)	non-PIPA (n=36)	P value
Age, years, mean \pm SD	61.7 \pm 9.1	62.9 \pm 7.9	61.4 \pm 9.5	0.589
Male	27 (60.0)	5 (55.6)	22 (61.1)	1.000
Region				
Seoul and metro	20 (44.4)	1 (11.1)	19 (52.8)	0.030
Others	25 (55.6)	8 (88.9)	17 (47.2)	
Season (months)				
Spring-summer (3-8)	21 (46.7)	7 (77.8)	14 (38.9)	0.110
Fall (9-11)	23 (51.1)	2 (22.2)	21 (58.3)	
Winter (12-2)	1 (2.2)	0 (0)	1 (2.8)	
Underlying diseases				
Previously healthy	26 (57.8)	4 (44.4)	22 (61.1)	0.461
Diabetes	11 (24.4)	4 (44.4)	7 (19.4)	0.190
Lung disease	6 (13.3)	2 (22.2)	4 (11.1)	0.583
Chronic kidney disease	0 (0)	0 (0)	0 (0)	NS
Liver cirrhosis	1 (2.2)	0 (0)	1 (2.8)	1.000
Cardiovascular disease	8 (17.8)	1 (11.1)	7 (19.4)	1.000
Autoimmune disease	3 (6.7)	1 (11.1)	2 (5.6)	0.497
Solid tumor	2 (4.4)	0 (0)	2 (5.6)	1.000
Hematologic malignancy	0 (0)	0 (0)	0 (0)	NS
Transplantation	0 (0)	0 (0)	0 (0)	NS
Human immunodeficiency virus	0 (0)	0 (0)	0 (0)	NS
Immunosuppressant and steroid user	0 (0)	0 (0)	0 (0)	NS
Symptoms and signs at initial presentation				
Fever	45 (100)	9 (100)	36 (100)	NS
Rash	8 (17.8)	3 (33.3)	5 (13.9)	0.326
Bleeding	6 (13.3)	1 (11.1)	5 (13.9)	1.000
Myalgia	23 (51.1)	5 (55.6)	18 (50.0)	1.000
Anorexia	30 (66.7)	5 (55.6)	25 (69.4)	0.454
Lymphadenopathy	10 (22.2)	2 (22.2)	8 (22.2)	1.000
Nausea or vomiting	21 (46.7)	3 (33.3)	18 (50.0)	0.469
Abdominal pain	9 (20.0)	2 (22.2)	7 (19.4)	1.000
Diarrhea	21 (46.7)	3 (33.3)	18 (50.0)	0.469
Cough/sputum/dyspnea	14 (31.1)	4 (44.4)	10 (27.8)	0.428
Headache	15 (33.3)	4 (44.4)	11 (30.6)	0.454
Altered mental status	22 (48.9)	9 (100)	13 (36.1)	0.001
Echisar	12 (26.7)	3 (33.3)	9 (25.0)	0.682

Values are n (%) unless otherwise indicated. Abbreviations: PIPA, putative invasive pulmonary aspergillosis; SD, standard deviation; NS, not significant.