254. National Trends in the Japanese Distribution of Major Candida Species Causing Candidemia During 2003–2017: A Report by the Epidemiological Investigation Committee for Human Mycoses in Japan
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Background. Candida species are a common cause of nosocomial bloodstream infections, and candidemia is associated with high mortality rates among adults and neonates. There is limited epidemiological data regarding candidemia in Japan. Therefore, the Epidemiological Investigation Committee for Human Mycoses in Japan performed a retrospective epidemiological survey of candidemia and causative Candida species.

Methods. Blood culture results from 2003 to 2017 were retrospectively evaluated. The data included the center-specific numbers of annual blood cultures, bacterial isolates that included fungi, numbers of fungi, and Candida species. Data were collected from 10 Japanese university hospitals located all over Japan.

Results. A total of 433,961 blood cultures were included. The prevalence of fungi in all cultures and in positive cultures were 0.53 ± 0.07% and 3.78 ± 0.47%, respectively. Among the results that were positive for Candida species (N = 2,270), C. albicans was the most common species (39.2%) and was followed by C. parapsilosis (22.8%), C. glabrata (15.6%), C. tropicalis (9.7%), C. krusei (2.2%), and others. And the temporal changes in the five major Candida species’ distributions were analyzed. The frequency of C. albicans was 48% in 2003 and 2004, approximately 40% during 2005–2011, approximately 30% in 2012 and 2014, and 40% in 2015–2017. The next most common species were C. parapsilosis and C. glabrata. The frequency of C. parapsilosis was approximately 16% in 2003, approximately 28% during 2005–2009 and 21.7% during 2010–2017. There was a significant difference in the C. parapsilosis rates for the first and second halves of the study period (24.8% vs. 21.7%, P = 0.03). The frequency of C. glabrata was significantly more common in the second half of the study period, compared with the first half (12.0% vs. 17.3%, P = 0.004). The frequency of C. tropicalis remains stable, and C. krusei was significantly less common in the second half of the study period, compared with in the first half (4.3% vs. 1.6%, P < 0.001).

Conclusion. The frequency of C. albicans has varied in each year in Japan, while that of C. glabrata has increased. Additional surveys are needed to continuously monitor the trends in the distribution of candidemia in Japan.

Disclosures. All authors: No reported disclosures.

255. Breakthrough Mucormycosis (BT-MCR) on Antifungals Having Mucorales Activity Portrays Worse Prognosis Compared with BT-MCR on Mold-Active Antifungals with no Mucorales Activity
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Background. BT-MCR is known to develop in the setting of agents having Aspergillus but no Mucorales activity. However, BT-MCR can occur even with the use of antifungals having with Mucorales activity in patients with hematologic malignancies and or stem cell transplant (HCT).

Methods. We reviewed the records of HM patients treated for MCR (1994 to 2019) at MD Anderson Cancer Center. We identified patients with BT-MCR on antifungals having with Mucorales activity during the study period. Cox regression model was used to evaluate the independent variables on outcome.

Results. A total of 628 T2 Candida panels resulted during the study period with 56.6% involving the intensive care setting. The average age was 59.5 years with 52.5% of the population being male. Of the total, 8.1% (n = 60) were positive. Only three patients had a positive fungal blood culture result with a negative T2 panel collected at the same time: sensitivity 94.3%, 95% CI 80.8–99.3%; specificity 94.2%, 95% CI 91.4–96.3%. 264 (42%) were ordered with concomitant antifungal therapy and 48.1% underwent de-escalation of therapy based on T2 result. The average time to de-escalation was 137 hours. Of the positive results, 40 (66.7%) had an antifungal ordered when the T2 panel was ordered and 30 (50%) were switched to appropriate therapy after T2 resulted in an average time of 11 hours.

Conclusion. Our data shows that while the T2 Candida Panel demonstrated faster and more sensitive results, there was still a considerable delay in achieving appropriate therapy. The variation in utilization of the T2 Candida Panel indicates that further intervention regarding appropriate use of the panel is required.