

P2165 Epidemiology and antifungal susceptibility profiles of clinical *Cryptococcus* species in SingaporeYen Ee Tan¹, Mei Gie Tan¹, Yanhong Delphine Cao¹, Ai Ling Tan¹¹ Singapore General Hospital, Singapore, Singapore**Background:**

Cryptococcus species can cause life-threatening diseases, often affecting the central nervous system (CNS). There have been reports of fluconazole-non-susceptible strains in patients with cryptococcosis elsewhere which is worrisome. There is limited data in the epidemiology and susceptibility profiles of *Cryptococcus* species in Singapore. This study aims to study the species distribution of *Cryptococcus* species received in a tertiary hospital in Singapore and to determine the genotypes and antifungal susceptibilities of a representative panel of invasive cryptococcosis.

Materials/methods:

Data on *Cryptococcus* species received from 2007 to 2018 was retrieved from the Laboratory Information System. Genotyping and antifungal susceptibility testing (AFST) were performed on a retrospective collection of 32 isolates from blood and cerebrospinal fluid (CSF) samples collected from 2015 to 2018. Genotyping was performed using multi-locus sequence typing and the AFST was performed using the Sensititre[®] YeastOne[®] YO10. Minimum inhibitory concentration (MIC) was obtained for each species/drug combination and interpreted using the epidemiological cut-off values provided by the Clinical and Laboratory Standards Institute with geometric mean (GM) MICs calculated for genera of more than 4 strains.

Results:

A total of 354 clinical *Cryptococcus* species were isolated in the past decade. The sites of isolation were: CSF (35.3%), blood (28.0%), respiratory (16.7%), skin and nail (15.3%) and others (4.8%). *Cryptococcus neoformans* complex (79.9%) was the commonest isolated species followed by *C.albidus* (7.6%) and *C.gattii* complex (4.8%). Other species included *C.laurentii* (3.1%), *C.humicola* (0.8%) and *C.uniguttulatus* (0.8%). Notably, invasive cryptococcosis was caused by *C.neoformans* complex (VNI) and *C.gattii* complex (VGII) and majority were isolated from the CSF. *C.albidus* and the rest of the species were isolated mainly from the skin and nail. Most tested strains were wild-type isolates except for 6 *C.neoformans* complex strains which displayed non wild-type MICs for amphotericin (MIC 1 µg/mL, GM MIC 0.55 µg/mL). All the isolates were susceptible to all azoles including fluconazole and flucytosine.

Conclusions:

C.neoformans complex (VNI) was the commonest *Cryptococcus* species isolated and CNS was the most frequently involved site. All tested isolates were susceptible to fluconazole which remains useful for treating invasive cryptococcosis but not amphotericin which has some strains displaying non wild-type MICs.

