**CANDIMAD study: a prospective multi-centre laboratory based survey of antifungal resistance in Candida spp. causing invasive candidiasis in Madrid**

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**Background:** Active surveillance studies are necessary to know local epidemiology and help clinicians start appropriate empirical antifungal treatment. Resistance rates in Candida spp. come mainly from isolates causing candidaemia and figures in Spain are relatively old (CANDIPOP study, 2014). We assessed the epidemiology and antifungal resistance of recent yeast isolates causing invasive infections in patients at hospitals located in Madrid, Spain.

**Materials/methods:** We studied 312 isolates from 282 patients (23 presented ≥2 isolates and 19 showed mixed cultures) admitted to 15 hospitals located in the Madrid metropolitan area from January 2019 to October 2019. Isolates sourced from blood (52.6%), abdominal samples (29.8%), peritoneal samples (10.9%) and other digestive tract samples (6.7%) were identified by MALDI-TOF and antifungal susceptibility to amphotericin B, azoles, micafungin, anidulafungin and investigational agent, ibrexafungerp (previously SCY-078) was tested according to EUCAST EDef 7.3.1 (Breakpoints table v.10.0). FKS genes were sequenced in echinocandin-resistant Candida isolates.

**Results:** The species distribution of isolates was C. albicans (48.7%, n=152), C. glabrata complex (19.2%, n=60), C. parapsilosis complex (17.6%, n=55), C. tropicalis (7.1%, n=22), C. krusei (2.9%, n=9), other Candida spp. (3.2%, n=10), and non-Candida yeasts (1.3%, Rhodotorula mucilaginosa [n=2], and Trichosporon inkin [n=2]). Overall, triazoles, candins and ibrexafungerp showed high activity. Ibrexafungerp was more active against C. parapsilosis than candins. Fluconazole resistance was detected in 6.1% of Candida isolates (n=19; C. krusei [n=9], C. glabrata [n=4], C. parapsilosis [n=2], C. albicans [n=1], C. tropicalis [n=1], C. guilliermondii [n=1], and C. inconspicua [n=1]) sourcing from blood (n=11), abdominal samples (n=6), and peritoneal samples (n=2). Rate of echinocandins resistance was lower than 1% and was found in isolates sourcing from blood (n=2) and abdominal samples (n=1): C. krusei (n=2; L701M FKS1) and C. glabrata (n=1, WT). Resistant isolates were from patients from nine out of the 15 hospitals. Non-Candida yeasts showed intrinsic echinocandin resistance. No resistance to amphotericin B was detected (Figure).

**Conclusions:** We found a low percentage of overall resistance (<7%), with anecdotal echinocandin resistance rate. Resistant isolates were sourced from blood (4%), abdominal samples (2%), and peritoneal samples (0.6%), and were distributed across different hospitals. No multi-drug resistant species were found.