

## O1014 No azole resistance is found in non-*fumigatus* *Aspergillus* isolates causing aspergillosis in the last 20 years in a large Spanish tertiary hospital

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**Background:** Even though *Aspergillus fumigatus* is the main species causing invasive aspergillosis (IA), other *Aspergillus* species are clinically relevant. Most of studies reporting antifungal susceptibility testing have been conducted on *A. fumigatus* complex isolates. We here assessed the antifungal susceptibility of a collection of non-*fumigatus* complex *Aspergillus* clinical isolates.

**Materials/methods:** We studied 130 non-*fumigatus* *Aspergillus* complex isolates from 108 patients admitted to Gregorio Marañón Hospital (Madrid, Spain) from January 1999 to June 2017; antifungal susceptibility testing using amphotericin B, and azoles (voriconazole, posaconazole, itraconazole, and isavuconazole) was performed according to EUCAST 9.3.1. We used species-specific clinical breakpoints or ECOFFs to classify the isolates. The isolates were identified by amplification and sequencing of *β-tubulin* gene.

**Results:** The following species were found: *Aspergillus flavi* section (n=48) [*A. flavus* (n=47), *A. tamarii* (n=1)]; *Aspergillus terrei* section (n= 40) [*A. terreus* (n=29), *A. citrinoterreus* (n=9), *A. hortai* (n=1), *Fenellia nivea* (n=1)]; *Aspergillus nigri* section (n=25) [*A. niger* (n=14), *A. tubingensis* (n=8), *A. awamori* (n=2), *A. piperis* (n=1)]; *Aspergillus nidulans* section (n=10) [*Emericella nidulans* (n=9), *E. quadrilineata* (n=1)]; and others species in which clinical breakpoints or ECOFFs are lacking (n=7) [*A. calidoustus* (n=5), *A. sydowii* (n=1), *A. amoenus* (n=1)]. Antifungal susceptibility data are shown in the table:

	Geometric Mean (Range)				
	Amphotericin B	Itraconazole	Voriconazole	Posaconazole	Isavuconazole
<i>A. flavi</i> section (n= 48)	0.73 (0.5 - 2)	0.27 (0.062 - 1)	1.12 (0.25 - 4)	0.15 (0.062 - 0.5)	0.83 (0.125 - 2)
<i>A. nigri</i> section (n= 25)	0.2 (0.125 - 1)	0.66 (0.25 - 2)	0.95 (0.25 - 2)	0.16 (0.062 - 0.5)	1.12 (0.5 - 2)
<i>A. terrei</i> section (n= 40)	1.57 (0.25 - ≥ 16)	0.22 (0.062 - 2)	0.72 (0.25 - 2)	0.09 (0.062 - 0.5)	0.53 (0.125 - 1)
<i>A. nidulans</i> section (n=10)	0.5 (0.125 - 1)	0.14 (0.062 - 0.25)	0.27 (0.125 - 0.5)	0.08 (0.031 - 0.25)	0.16 (0.125 - 0.25)
Others (n=7)	0.82 (0.5 - 2)	8.83 (0.25 - ≥ 16)	5.94 (0.5 - ≥ 16)	3.99 (0.062 - ≥ 16)	1.64 (0.25 - 4)
Overall (n=130)	0.70 (0.125 - ≥ 16)	0.35 (0.062 - ≥ 16)	0.93 (0.125 - ≥ 16)	0.15 (0.031 - ≥ 16)	0.69 (0.125 - ≥ 16)

Resistance to voriconazole was found in only one *A. flavus* isolate; three *A. terreus* isolates were resistant to amphotericin B. No resistance was observed in either *A. nigri* section or *A. nidulans* section. Overall resistance to amphotericin B and voriconazole was 2.3% and 0.8%, respectively.

**Conclusions:** Resistance among non-*fumigatus* *Aspergillus* isolates was lower than 1% to voriconazole, and 2.3% to amphotericin B; no resistance was observed for the remaining azoles tested. Azole resistance in clinical non-*fumigatus* *Aspergillus* complex isolates is a very uncommon event in Madrid.