Critical Care Committee Meeting: Antifungal Report

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Patients started on micafungin or fluconazole from March 2023 to May 2023 were selected using SlicerDicer. Reports were generated using orders submitted for micafungin or fluconazole. 31 patients were identified. Initially, 4 patients were started on fluconazole and 27 were started on micafungin.

Patients were categorized as being started on antifungal therapy prophylactically, empirically, or definitively. To be treated definitively, patients had to have cultures demonstrating the presence of yeast. Patients were deemed to be inappropriate candidates for fluconazole therapy if they had isolates intrinsically resistant to fluconazole, had QTc prolongation, or had significant drug interactions. The table below shows the number of patients who were started on micafungin based on their exclusions, if any were present.

Number of Patients on Micafungin and Exclusions to Fluconazole					
	Aspergillosis	**Candida glabrata**	**Drug interactions**	**No exclusions present**	**QTc prolongation**
Definitive	0	2	0	8	3
Empiric	1	0	2	6	3

Drug therapy based on fungus isolated by source was also tracked, found in the table below.

	Blood	**Bronchoalveolar lavage**	**Peritoneal Fluid**	**Tracheal Aspirate**	**Urine**
Fluconazole	**1**	**0**	0	0	**1**
Candida albicans	1	0	0	0	
Yeast	0	0	0	0	1
Micafungin	**5**	**1**	**1**	**1**	**4**
Candida albicans	1	0	0	0	0
Candida glabrata	2	0	0	0	0
Candida tropicalis	0	1	0	0	0
Yeast	0	0	1	1	4
Candida parapsilosis	2	0	0	0	0

Durations of therapy were also tracked for each patient. One patient was started on micafungin, but with emerging data and no exclusions, the patient was transitioned to fluconazole. One patient was started on fluconazole, but due to QTc prolongation, was transitioned to micafungin. All other patients were maintained on the medication they were started on. We tracked the average duration of therapy based on the indication present in the table below.

Average Duration in Days Based on Indication		
	Fluconazole	**Micafungin**
Intra-abdominal infection	5	8
Pneumonia	4	7
SSTI	1	0
Surgical prophylaxis	1	4
UTI	5	7

Additionally, we tracked the average duration of therapy for each drug with or without the presence of an ID consult. Data is reported in the table below.

Duration of Therapy With or Without ID Consult		
	Fluconazole	**Micafungin**
No consult placed	3	7
Consult placed	3	7

We also tracked the number of orders placed by providers. We saw the highest number of orders placed by intensivists. We also tracked the frequency of orders placed in each unit. Secondary orders for the same patient for a continuation of therapy was consolidated into one order. Data is reported in the table below.

Provider Service and Number of Orders	
ID	9
Intensivists	13
Surgery	7

We observe many patients initiated and maintained on micafungin without exclusions for receipt of fluconazole. Providers should be educated on the importance of transitioning to fluconazole in patients without exclusions to improve antimicrobial stewardship.