
NOVEL ANTIFUNGAL USE IN AN INNER CITY HOSPITAL, A COMPARISON BETWEEN CASPOFUNGIN AND VORICONAZOLE

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Background: Over the past 5 decades, therapeutic options for invasive fungal infections have remained limited and sub-optimal. Recently, novel antifungal agents like caspofungin and voriconazole have been approved for use. These antifungals offer an advancement in antifungal therapy; however, clinical experience with these agents is limited. We therefore sought to examine how these agents are being used and their impact on patient outcomes at an urban medical center. **Methods:** The charts of the first 15 patients receiving voriconazole and 15 consecutive patients receiving caspofungin were retrospectively identified and reviewed. Data extraction included patient demographics, past medical history, current admission diagnosis, laboratory values, radiology results, microbiology, and antifungal use. Follow up care in outpatient clinics were reviewed for patient outcome and radiological improvements, when available.

Results: 11 patients received antifungal treatment with caspofungin, 3 with combination amphotericin-lipid complex/caspofungin and 1 with combination caspofungin/voriconazole. Fourteen of 15 patients were treated with voriconazole alone. Of these, 3 were treated with caspofungin inpatient and switched to oral voriconazole for outpatient use. Ten patients in each treatment began antifungal therapy with a different agent that was discontinued due to intolerance or lack of efficacy. Fifteen of 26 patients had underlying leukemia/lymphoma; 18 patients were neutropenic during admission. Seven and 8 patients with probable fungal pulmonary, 3 and 2 patients with fluconazole-resistant *Candida* infections were treated with caspofungin and voriconazole, respectively. Five (33%) caspofungin-treated and 6 (40%) voriconazole-treated patients improved. Three caspofungin-treated and 2 voriconazole-treated patients with probable fungal pneumoniae progressed and 1 voriconazole-treated *Candida* infection persisted. Caspofungin and voriconazole therapy were discontinued in 5 and 3 patients due to lack of oral regimen/insurance coverage, in 3 and 4 patient who were no longer neutropenic, and 0 and 4 for side-effects, respectively. Three patients receiving caspofungin and 1 patient receiving voriconazole expired during therapy. **Conclusion:** Caspofungin and voriconazole are being used as second-line agents to treat a variety of fungal infections. Caspofungin is used more frequently in combination regimens and may be better tolerated than voriconazole.