Poster Abstract Session:
187. Clinical Practice Issues
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#1375. Fluconazole resistance in cryptococcus neoformans: an emerging threat to the immune-compromised

Part of Session: 187. Clinical Practice Issues

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Background:
Antifungal susceptibility testing of Cryptococcus neoformans (C.neoformans) to fluconazole is not routinely done with the first episode of infection and is usually recommended for persistent or relapsing disease. Fluconazole resistance is defined as a minimal inhibitory concentration (MIC) greater than or equal to 16 Î¼g/ml. We describe a trend of progressively increasing MIC in our institution including patients without prior fluconazole exposure.
Methods: Â Microbiology records for C. neoformans isolates which were tested for antifungal susceptibility between 2009 and 2011 were reviewed. Sensititre YeastOne colorimetric microdilution test was used throughout the study period. The records of all patients identified were reviewed to classify disease state, co-morbid conditions and for evidence of prior fluconazole exposure.
Results: Â Antifungal susceptibility testing for Â C. neoformans in patients with invasive Cryptococcal Disease was performed in 4 patients in 2009, 4 in 2010 and 5 in 2011.Â
In 2009 50% of isolates had MIC of 1 Î¼g/ml or less, and 50% had MIC 2 to 4 Î¼g/ml.Â
In 2010 there were no isolates with MIC of 1 Î¼g/ml or less,Â 50% had MIC 2 to 4 and 50% had MIC 8 to 16 Î¼g/ml. In 2011 60% (3 out of 5 patients) had MIC of 32 Î¼g/ml one with MIC of 16 Î¼g/ml.Â and one had MIC of 8 Î¼g/ml.Â All isolates over study period were fully susceptible to Itraconazole and Voriconazole. Ninety percent of patients had AIDS as the underlying illness, all of whom had cryptococcal meningitis with C. neoformans isolated from CSF and/or blood. Over study period 4 of the 7 patients who had an MIC of 8Î¼g/ml or more (57%) were fluconazole naÃ¯ve.Â
Conclusion:
The IDSA guidelines for Management of Cryptococcal Meningitis do not recommend initial MIC testing of C. neoformans isolates. Given evidence of the potential for local emergence of fluconazole resistance,Â some centers may need to consider introducing susceptibility testing on initial isolates where there appears to be an emergence ofÂ fluconazoleintermediate and -resistant C. neoformans isolates.