Original Paper

Drug susceptibility of Aspergillus flavus and A.fumigatus to Itraconazole and Amphotericin B

Kazemi A (PhD)*[1], Nowrozi H (PhD)[2], Teshfam M (PhD)[4], Teimorian Sh (PhD)[4]

[1]Assistant Professor, Department of Pharmacology, Islamic Azad University, Science and Research Branch, Tehran, Iran. [2]Assistant Professor, Department of Laboratory Sciences, School of Allied Medical Sciences, Iran University of Medical Sciences, Tehran, Iran. [3]Associate Professor, Department of Physiology, Islamic Azad University, Science and Research branch, Tehran, Iran. [4]Assistant Professor, Department of Genetics, Faculty of Medical Sciences, Iran University of Medical Sciences, Tehran, Iran.

Abstract

Background and Objective: Aspergillosis is the most current causative agent of exogenous fungal nosocomial infection. This study was done to evaluate the drug susceptibility of Aspergillus flavus and A.fumigatus to itraconazole and amphotericin B.

Materials and Methods: This Laboratory study was done on 25 Aspergillus fumigatus and 25 Aspergillus flavus species isolated from transplant's patients. Drug susceptibility test was done according to NCCLS M38-P document. Fungal suspensions of mentioned fungi were supplied with ranges $0.5–5\times10^4$ by spectrophotometer at 530 nm. Serial dilutions of drugs were supplied from 0.03125 to 16 µg/ml and MICs determined following 48h incubation at 35°C.

Results: Obtained MICs ranges for Aspergillus fumigatus and Aspergillus flavus were 1-4 µg/ml and 0.5–4 µg/ml for itraconazole, respectively while MICs ranges against Aspergillus fumigatus and Aspergillus flavus were 0.5-2 µg/ml and 0.25-2 µg/ml for amphotericin B, respectively. Amphotericin B MICs were significantly lower than itraconazole ($P<0.05$).

Conclusion: Aspergillus flavus and A.fumigatus were susceptible to amphotericin B and itraconazole.

Keywords: Aspergillus flavus, Aspergillus fumigatus, Drug susceptibility, Amphotericin B, Itraconazole

---

*** Corresponding Author: Kazemi A (PhD), E-mail: dr_ali_kazemi@yahoo.com**

Received 30 July 2012 **Revised** 1 September 2012 **Accepted** 18 September 2012

This paper should be cited as: Kazemi A, Nowrozi H, Teshfam M, Teimorian Sh. [Drug susceptibility of Aspergillus flavus and A.fumigatus to itraconazole and amphotericin B]. J Gorgan Uni Med Sci. 2014; 15(4): 66-71. [Article in Persian]