

Original Paper

## Application of PCR method in specific identification of *Fusarium solani* in HIV positive patients

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### Abstract

**Background and Objective:** *Fusarium solani* is the common etiological agent of fungemia and disseminated fusariosis, which is associated with high incidence of mortality in immune-compromised host. Due to high level of resistance of antifungals in *Fusarium solani*, rapid and specific identification of organism is essential. This study was done to evaluate the PCR method for rapid and specific diagnosis of *Fusarium solani* in serum samples of HIV positive patients.

**Methods:** In this descriptive study, the PCR test based on mitochondrial cytochrome b gene as the target gene with 330 bp product was optimized. PCR was applied on 45 serum samples of HIV positive patients after evaluation of sensitivity and specificity of the test.

**Results:** In the optimized PCR test, the 330 bp product was amplified. The sensitivity of the test was a copy of *Fusarium solani* genome, and its specificity was 100%. Among 45 serum samples, 9 cases (20%) were positive for *Fusarium solani*.

**Conclusion:** The PCR method has functional capabilities for direct, rapid and specific clinical diagnosis of *Fusarium solani* in HIV positive patients.

**Keywords:** *Fusarium solani*, Mitochondrial cytochrome b gene, HIV, PCR

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