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## Molecular identification of Microsporidian spp. in immune-deficient patients in Iran

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Microsporidia are often considered as an opportunistic infection in patients with impaired immune systems such as transplant recipients and patients with acquired immune deficiency syndrome (AIDS). Due to the increasing prevalence of parasitic infections and immunodeficiency diseases, the aim of the study is to evaluate molecular identification of *Enterocytozoon bieneusi* and *Encephalitozoon* spp. in immune-deficient patients in Ahvaz, southwest of Iran. At first, 310 stool samples were collected from patients with immunodeficiency. The specimens were stained by modified trichrome (weber) and were examined microscopically. The extracted DNA samples were evaluated by multiplex/nested PCR method. The products of multiplex/nested PCR were explored by RFLP method using the restriction enzyme of MnlI. Of 310, 93 samples were suspected positive for microsporidia by the staining. Also, of 310, 88 samples were positive by the multiplex/nested-PCR test that 62 samples were positive for *E. bieneusi* as well as 26 were detected as *Encephalitozoon* species that including 3 *E. cuniculi*, 19 *E. intestinalis* and 4 *E. hellem*. Of 62 *E. bieneusi*, 45, 16 and 1 were detected as genotype D, M and WL11, respectively. Also, Of 3 *E. cuniculi*, 1 and 2 cases were identified as genotype I and II, respectively. All *E. hellem* samples were included genotype 1A. Our findings revealed a relatively high prevalence of microsporidia species in immunodeficient patients. The highest risk of this infection is at individuals with impaired immune systems that it can be life-threatening in people with immune system dysfunction. It is essential that the high-risk people should be receiving the information about the risk of direct contact with infected individuals and animals.

### Biography

Mehdi Tavalla, did Ph.D. in Medical Parasitology, Tehran University of Medical Sciences, 2012 Master of Medical Parasitology, IRAN University of Medical Sciences, 2007. Mehdi Tavalla has more than 10 years experiences in identification of medically important Parasites and other microorganism specially the Coccidian and Microsporidia. He is the author of over 40 scientific publications and conference papers. He has served as an Assistant Professor of Medical Parasitology at Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran where he conducted researches in "Microsporidian" identification and epidemiology and is currently conducting researches on the isolation, identification and Genotyping susceptibility testing of RFLP from various hosts, animal and human origins.

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