

Occurrence of microsporidial co-infection in renal transplant recipients

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Due to deficiencies in their immune system caused by life-long immunosuppression, organ transplant recipients are the group of patients with the highest risk of microsporidial infection and are more likely to experience infection by more than one pathogen species. Determination of co-infection by two or more microsporidial species is important when considering therapy. Generally, immunological status can be improved by lowering the dose of the immunosuppressive treatment, and this can result in elimination of the organisms. However, in some cases, further treatment may be necessary. Albendazole is the drug of choice against microsporidia and is used successfully for treating *Encephalitozoon* spp., but this drug appears to be poorly effective against *Enterocytozoon bieneusi*. Fumagillin treatment is common in transplant recipients, despite its toxicity and serious side effects. Hence, a molecular characterization of microsporidia is needed to determine appropriate therapy.

E. bieneusi and *E. cuniculi* co-infection was identified in four renal transplant recipients. Although both urine and stool samples were tested, co-infection with both species was found in 75 % of the urine samples (3/4); No co-infection was found in the stool samples. In one patient, *E. cuniculi* was confirmed in urine and *E. bieneusi* in the stool. As the susceptibility of microsporidia for treatment is species-specific, it seems reasonable to determine the species of any such pathogens identified in renal transplant recipients.

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