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Abstract (poster session)

Frequency and genotypic characterisation of microsporidia among patients with renal transplantation, human immunodeficiency virus and haematological malignancy

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Background: Microsporidium, an opportunistic protozoan, infects immunocompromised hosts. Though patients with renal transplantation (RT) and hematological malignancy (HM) are immunocompromised, data on microsporidiosis among them and studies on comparative utility of its various diagnostic methods are scanty. Accordingly, we aimed to study, (a) frequency of microsporidia among patients with HIV, RT and HM, (b) Comparative evaluation of calcoflour white stain and polymerase chain reaction (PCR) taking modified trichrome stain as gold standard, (c) genetic characterization of Microsporidia. Methods: 550 stool samples from 182 patients with HIV, RT, HM were examined from April 2010 to August 2011 for microsporidia by stool microscopy [modified trichrome and calcoflour white stains (n=182)], PCR was done in all stool samples positive by calcoflour white stain [n=70]. Species identification by restriction fragment length polymorphism (RFLP) and confirmed by sequencing. Results: 18 of 182 (10%) patients (12/18, 66.7% male) and none of 70 healthy subjects were positive for Microsporidium (P=0.003) by modified trichrome stain. 70/182 (38.5%) patients were positive by calcoflour white stain. Microsporidia was significantly detected among patients with RT and HIV as compared with healthy subjects using modified trichrome stain (12/121, 10% vs. 0/70; P= 0.003 and 4/35, 11.4% vs. 0/70; P= 0.01). Microsporidia were more often detected in patients with diarrhea than those without diarrhea (15/103, 14.6% vs. 3/79, 3.8%, P=0.05). 11/14 patients had CD4 count < 200 cells/ μ l. Sensitivity and specificity of calcoflour white stain and PCR were 100%, 68.3% and 88.9%, 100%, respectively. 16/18 (88.9%) were positive by PCR and *Enterocytozoon bienersi* (*E. bienersi*) was identified in all of them which was confirmed by sequencing. Conclusions: Microsporidia is an important cause of diarrhea in patients with HIV and RT. Stool PCR has high specificity than calcoflour white stain to diagnose Microsporidia. *E. bienersi* is the common species causing intestinal microsporidiosis in India.