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Microsporidiosis and HIV/AIDS

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Microsporidia are eukaryotic, spore forming obligate intracellular parasites, though they were discovered more than 100 years ago, the first well documented case of human microsporidiosis was reported in 1959. It could not have been anticipated when these organisms were first described that they would be recognized as the agents of distressing and life-threatening human diseases. The HIV/AIDS epidemic has revealed their propensity for infecting man, although it is still not known whether microsporidia cause strictly opportunistic zoonosis or exist in healthy people as latent infections, which becomes exacerbated when the patients becomes immuno-compromised. Microsporidia as opportunistic infections are becoming increasingly recognised as infectious pathogens causing intestinal and extra-intestinal diseases in AIDS patients. They are characterised by the production of resistant spores that vary in size depending on the species; and poses a unique organelle, the polar tubule (polar filament), which is coiled inside the spore as demonstrated by its ultra structure. Other unusual characteristics are the lack of mitochondria and the prokaryotic-like ribosomes, which indicate the primitive nature of the group. Presently there are seven genera, *Enterocytozoon*, *Encephalitozoon*, *Nosema*, *Pleistophora*, *Trachi Pleistophora*, *Brachiola*, *Vittaforma* species which have been reported from human hosts causing a variety of human diseases, involving multiple organ systems, which include intestinal, ocular, sinus, pulmonary, muscular and renal diseases in both immuno-competent and immuno-compromised patients. This paper aimed to summarise the unusual features of the biology of microsporidia, update ourselves with the new clinical manifestation, latest techniques of identification and the new treatment modalities to overcome these infections.

Biography

I Omalu Innocent C. J. completed my PhD at the age of 35 years from University of Jos, Nigeria. I am presently a lecturer with Federal University of Technology, Minna. I won the 2006 HIV Research Scholarship on training in molecular biology (PCR based diagnostics) and HPLC based drug analysis in HIV/AIDS in African Institute of Biomedical science and Technology and Stanford University Medical Centre, Biomedical Research and Training Institute and Institute of Continuing Health Education, University of Zimbabwe regional fellowship 2006 training in Biostatistics and data analysis in Harare Zimbabwe. I am also a consultant with the Federal Ministry of Health, Nigeria on Roll Back Malaria North Central Zone. I have published more than 20 papers in reputed journals both locally and internationally and currently the managing editor of the International Journal of Applied Biological Research and Member Research Board of Advisor of the American Biographical Institute.