

PARASITOLOGY

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Genotyping of *Cryptosporidium* species isolated from diarrheic children in Makh, Saudi Arabia**Mohamed El-Malky**

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Cryptosporidiosis is increasingly identified as an important cause of morbidity and mortality worldwide. Studies in high-income countries and low-resource settings have recognized the importance of *Cryptosporidium* as a cause of diarrhea. The objectives of the current study were to determine the detection rate and the molecular characteristics of *Cryptosporidium* in diarrheic children in Makh Region. A total of 1380 fecal samples were collected from children up to 14 years attending 3 of the major hospitals of Makh between March 2015 and January 2016. Collected stool samples were subjected to direct microscopic examination, staining of direct thin smears and crypto antigen detection using ImmunoCard STAT, *Cryptosporidium*/*Giardia* rapid test. A part of each positive stool sample was kept frozen at -20 °C. Initial screening by staining and immunochromatographic detection kit revealed 22 possible positive cases. PCR was performed for positive cases by amplification of a portion of the sequence encoding the small (18S) subunit of rRNA producing a 435-bp product. *Cryptosporidium* genotyping was performed by RFLP analysis of PCR products. The genotyping distribution was 18 cases showing *C. hominis* genotype, four showing *C. parvum* genotype. The data showed a higher prevalence of *C. hominis* (81.8%), the commonest anthroponotic species, suggesting a human-human transmission. Further investigations are required to determine the subgenotypes of *C. parvum* to clarify the mode of transmission in order to improve the control measures. The fact that only human genotypes were detected suggests that cryptosporidiosis must be considered as a non zoonotic disease in Makh region.

Biography

Mohamed El-Malky has completed his PhD from Nagoya City University, Japan and Postdoctoral studies from Nagoya City University, School of Medicine and Tokyo Medical and Dental University, Graduate School of Medical and Dental Sciences. He has published more than 20 papers in reputed journals. He is presently working as an Associate Professor of Medical Parasitology, Faculty of Medicine, Umm Al-Qura University, Makh, Kingdom of Saudi Arabia.

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