JOURNAL OF PURE AND APPLIED MICROBIOLOGY, October 2008. Vol. **2**(2), p. 541-542

Occurrence of Cryptosporidial Infection in Immunocomprised Individuals in Kashmir Valley

S.A. Hajam[1], J. Sharif[2], M. Amin[3] and Aara Rifat[4]

[1]Department of Bioscience Barkatullah University Bhopal - 462 026, India.
[2]Division of Veterinary Public Health, Faculty of Veternary Sciences & Animal Husbandry SKUAST-K, Alusteng, Srinagar - 190 006, India.
[3]Faculty of Veternary Sciences and Animal Husbandry SKUAST-K, Alusteng, Srinagar - 190 006, India.
[4]Department of Biochemistry, University of Kashmir -190 006, India.

(Received: 12 April 2008; accepted: 24 June 2008)

The occurance of Crytosporidial infection in Immunocompromised individuals was found to be 18.66% in Kashmir Valley. A total of 75 samples were processed & examined & 14 samples were found positive.

Key words: Immunocompromised, Crytosporidial, Kashmir valley.

Crytosporidiasis, a zoonotic disease caused by crytosporidum species, characterized by enterocolitis and diarrhea in man. The disease has got multiple host range (Dubey.*et al.,* 1990. Surumay *et al.*, 2000; Jose *et al.,* 2002; Barwick *et al.,* 2003). It mainly occurs in immunocompromised individuals were the duration of the disease is prolonged (up to 20 weeks) with severe symptoms (up to 71 loose watery motion a day and loss of body fluids up to 17 liters which leads to severe weight loss) and death. Domestic livestock plays an important role in environmental contamination by producing oocysts and human infection have been associated with exposure to infected animals particularly calves and lambs (De-Graff *et al.*, 1999, Mosier *et al.,* 2000). The infection is transmitted predominantly from person to person, but direct infection from contamination of surface water and drinking water by domestic or wild animal feces drinking water by domestic or wild animal feces can also be important (Smith *et al*., 1990).

MATERIAL AND METHODS

A total of 75 diarrhoeic fecal samples were collected from Immuno-compromised individuals belonging to different places in Kashmir Valley from SKIMS. The samples were

* To whom all correspondence should be addressed.

diluted 1:5 with normal saline and sieved through strainer to remove coarse particles. After centrifugation,15ml of Sheather's sugar solution was used for the separation of oocysts. A thin layer of supernatant was taken on glass slide by platinum loope. Direct thin fecal sample smears were also made to determine the fecal shedding of Cryptosporidal oocyst. Both the slides were stained following modified Kinyoun's acid fast staining method (Current & Garcia, 1991). Identification of Cryptosporidial species oocysts was done by observing under oil immersion by phase contrast microscope.

RESULTS AND DISCUSSION

Out of 75 diarrhoeic fecal samples processed and examined for cryptosporidial species oocyst, 14 samples were found positive with occurrence of 18.66%. Though the infection occurs both in immunocompetent and immunocompromised individuals but in immunocompetent individuals the disease results in self limiting diarrhoea. But in Immunocompromised individuals the dirrhoea is severe.

REFERENCES

1. Barwich, R.S., Mohammed, H.Q., White, M.E. Bryant, R.B., Prevalence of Giardia spp. And Cryptosporidium spp. On diary farms in southeastern New York State. *Preventive Vet. Med.* 2003; **59**:1-2.
2. Current, W.L. and Garcia, L.S., Cyrptosporidiosis. *Clin. Microbiol. Rev*. 1991; **4**: 325-358.
3. De Graff, D.C., Vanopdenbosch, E., Ortega-Mora, L.M., Abbassi, H. and Peeters, J.E., Areview of the importance of cryptosporidiosis in farm animals. *Int. J. Parasitol*. 1999; **29**: 1269-1287.
4. Dubey, J.P., Fayer, R. and Rao, J.R., Cryptosporidial oocysts in feces of water buffaloes and Zebu cattle in India. *J. Vet. Parasitol.* 1990; **6**: 55-56
5. Jose, A., Castro, H., Yolanda. A., Gonzalez, l., Mercedes, M.M. and Elvira, A.M., Astudy of cryptosporidiosis in a cohort of neonatal calves. V*et. Parasitol.* 2002; **106**: 11-17
6. Mosier, D.A., Oberst, R.D., Crptosporidiosis: A global challege. *Ann. New York Acad. Sci.* 2000; **916**: 102-111.
7. Smith, H.V. and Rose, J.B., *Parasitol. Today*, 1990; 6, 8.
8. Surumay, V.Q. and Sandoval, Y., Cryptosporidim parvum in buffaloes of a farm in Mara municipoim, Zulia state. Venezuela. *Veteranaria Tropical.* 2000; **25**: 285-290.