

**Enteropathogenic microorganisms in children under ten years of age
attending Kanti Children's Hospital**

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ABSTRACT

Diarrhoeal disease is a major problem throughout the world, and is responsible for high morbidity and mortality among children, especially in developing countries. For the investigation of etiological agents of diarrhoea, 607 diarrhoeal samples of children under 10 years of age with acute diarrhoea were collected from both oral rehydration therapy (ORT) ward and out patient department (OPD) of Kanti Children's Hospital. The study was conducted from October 2006 to September 2007 and investigation was done in Health Research Laboratory, IOM, Maharajgunj. Out of 607, 44% (267/607) cases were positive for either kind of enteropathogens. The prevalence of enteropathogens were found to be significantly high in ORT 169 (63.3%) than OPD 98 (36.7%) ($P < 0.05$). Rotavirus was in 27.0% and parasites were in 15.16% of them protozoa in 12.19% and helminthes in 3.0% among total cases. *Entamoeba histolytica* in 6.9%, *Giardia lamblia* in 3.8%, *Ascaris lumbricoides* in 1.3%, *Cyclospora cyetanensis* in 1.2%, *Trichuris trichiura* in 0.8%, Hookworm 0.5%, *Entamoeba coli* and *Hymenolepis nana* in 0.3% of the total cases. The prevalence bacterial pathogens were 6.6%, of them *Shigella* spp. in 3.3%, *Vibrio cholera* in 2.0% and *Salmonella* spp. in 1.3% of the total cases. Out of 607, 30 (11.2%) cases showed positive only for bacteria 75 (28.1%) cases showed positive only for parasites and 133 (49.8%) cases were positive for only rotavirus. There were 29 cases (10.9%) of co-infections either with bacteria; rotavirus and parasites. Both rotavirus and bacteria were highest in age group 0-2 yrs constituting 30.3% and 32.5% respectively and parasites in 6-8 yrs (33.3%). Ethnic group wise distribution of enteropathogens revealed that the group Magar/Rai/Gurung/Limbu/Tamang was highest 40.1%. The prevalence of enteropathogens was highest in summer season i.e. 28% (75 out of 267). The prevalence of enteropathogens was found highest in children using tap water (79% i.e. 211 out of 267) and raw water user 53.6% (143 out of 267). Out of total cases (607), 323 (53.2%) had nausea and vomiting and 370 (60.9%) cases had watery stool. In hospital, highest numbers of cases were treated with oral rehydration therapy 236 (39%).