Dear Editor,

Human rotaviruses are the most important etiologic agents of acquired diarrhoea in infants and young children worldwide. Rotavirus diarrhoea is more frequent during the winter. Limited reports are available from India about diarrhoea due to rotavirus. Some reports of rotaviral diarrhoea in children between 1 month - 4 years of age are available. Therefore, we studied the prevalence of rotaviral diarrhoea in hospitalized children in the age group of 5-12 years. Total samples processed for rotavirus were 92. All of them were liquid stools. There were 83.7% patients in the age group of 5-8 years and 16.3% in 8-12 years. All the stool samples were examined macroscopically and microscopically for the presence of any ova and/or cyst. For bacterial pathogens, enrichment was done in alkaline peptone water and gram negative broth and incubated at 37°C for 24-48 hours. The bacterial enteropathogens were identified by standard laboratory methods. ELISA was performed by using Ridascreen® Rotavirus manufactured by R-Biopharm GmbH, Darmstadt, Germany which utilizes monoclonal antibodies directed against VP6 (group specific antigen for all known human rotaviruses), in a solid phase sandwich type ELISA.

Out of 92 stool samples tested, 31 (33.7%) were greenish liquid, 56 (60.9%) yellow liquid and five (5.4%) liquid with mucus and blood. Moderate diarrhoea was seen in 53 patients (57.6%), 32 had severe diarrhoea (34.8%) and seven had mild diarrhoea (7.6%). Fever was present in 49 patients (53.3%), followed by abdominal pain in 26 (28.3%), vomiting in five (5.4%) and other symptoms in four (4.4%). Bacterial pathogens isolated were Escherichia coli in 14 samples (15.2%) and Aeromonas hydrophila in one sample (1.1%). In one sample, cysts of Entamoeba histolytica were detected. Ten were positive for rotavirus by ELISA, giving an overall positivity rate of 10.9%. Out of 10 positive cases, eight were greenish liquid (80%) and two were yellow liquid (20%). Fever was present in six (60%) patients, abdominal pain in three (30%), vomiting in one (10%) and respiratory tract infection in a patient who also had fever. Moderate diarrhoea was present in seven cases and remaining three had severe diarrhoea. All the positive cases were between October and January.

Prevalence rate of rotaviral diarrhoea was 10.9% in our study. Lee et al had reported 24% positivity in cases of diarrhoea due to rotavirus. Though majority of the studies have been in children upto 5 years of age, our study shows that rotaviral diarrhoea is also present in older children with a lesser prevalence rate. Lee et al had reported 92% cases with dehydration. All our positive cases had dehydration (70% moderate and 30% severe). Rotaviral diarrhoea episodes always tend to be more acute, causing vomiting and greater dehydration, and more often require hospitalization. All our patients were hospitalized with acute diarrhoea, only one child presented with vomiting. An Indian study has reported 26% positivity by ELISA and all were from children with acute diarrhoea. All the positive cases were detected during the months of October to January, which is in accordance with other studies. All the positive cases presented with liquid stools, and greenish liquid was a sensitive predictor of rotaviral diarrhoea (p value < 0.001) in this study. Severity of diarrhoea was not statistically significant.
Electron microscopy and polyacrylamide gel electrophoresis (PAGE) are 100% specific, but slightly less sensitive than the ELISAs. ELISA is most sensitive compared with other tests used. It also gives a rapid diagnosis and does not require any sophisticated equipment except ELISA reader. Thus, all children presenting with greenish liquid stools, especially during the winter months, should be routinely screened for rotavirus by ELISA, as it is a rapid and sensitive method for detection of rotavirus.

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References


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A Serological Study of Leptospirosis among Hospitalized Jaundice Patients in and around Kolkata

Dear Editor,

Leptospirosis, a direct anthropozoonosis has gained importance both in man and animals and is assuming greater dimension as a re-emerging disease. In India, various workers have reported the disease from various parts of the country. But systemic studies are limited. The true incidence of human leptospirosis in West Bengal, particularly in Kolkata metropolitan city is not known either because of a lack of awareness on the part of the technicians (both physicians and veterinarians) or the lack of diagnostic techniques. The present study has been undertaken as a pilot study. It places on record the serological evidence of leptospirosis in hospitalized jaundice patients in and around Kolkata by using microscopical agglutination test (MAT).

Forty two consecutive patients admitted with jaundice as a predominant clinical symptom were taken into consideration in this serological survey work for leptospirosis between the period of January to June, 2003. About 5mL of blood collected from each patient was kept undisturbed for about 2-3 hours at room temperature. The sera were separated and preserved at –20°C until use.

All the samples were examined against four leptospiral serovars namely –*L.interrogans* serovar canicola, pomona,icterohaemorrhagiae and grippotyphosa. These were kindly provided by PMRC, Port Blair, Andaman. The organisms were maintained in EMJH (Elling haussen, McCullough, Johnson and Harris)2 semi-solid and liquid media in the laboratory at 29°C in screw-capped test tubes containing 5mL media (liquid). Cultures of 4-7 days were used as antigens. Hyperimmune sera were raised against the four serovars in duplicate leptospira-antibody-free healthy rabbits by injecting serial increasing dose of leptospira liquid