

"Prevalence of rotavirus infection among under five children with acute diarrhoea admitted at the 550-bedded Children Hospital, Mandalay"

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Abstract

Diarrhoea is one of the commonest causes of death in children under 5 in developing countries. Most episodes of acute diarrhoea in children under 5 were caused by viruses. Rotavirus is a major cause of acute gastroenteritis in infants and young children worldwide. This hospital-based, cross-sectional descriptive study was conducted to find out the prevalence of rotavirus infection and its associated factors among under 5 children admitted at 550-bedded Mandalay Children Hospital during the period of January to April 2018. A total of 384 patients who admitted to the study hospital presenting with acute diarrhoea were involved in this study. Stool samples were tested for rotavirus antigen by using SD Bioline kits (Standard Diagnostics, Inc. Korea). Data entry was done by using SPSS software 20.0 version and analysis was done by using R software version 3.4.4. Thirty-eight percent (146) of the participants were female and 62% (238) were male. More than half of the participants were under one year (58.9%) and 2.9% were attending day care. Presenting signs and symptoms were fever (82%), vomiting (71%), dehydration (65%), watery diarrhea (64%), and abdominal pain (10%). Among the 384 stool samples, rotavirus antigen was detected for 224 cases (58.3%, 95% CI= 53.2-63.3). Prevalence of rotavirus infection was found higher among male (61.8%) than females (52.7%) but the difference was not statistically different ($P > 0.05$). Significant factors associated with positive rotavirus infection were found to be age of 1-2 years (OR =0.33, 95% CI = 0.17, 0.72) compared to that of under one, fever (OR = 4.27, 95% CI = 2.42 - 7.48), vomiting (OR = 3.02, 95% CI = 1.92-4.77). This study highlights a higher prevalence of rotavirus infection under 5 years of age with acute diarrhea in clinical practice and its associated factors and the information can be useful for providing appropriate and early treatment of complications in diarrhoea in this area. By knowing disease burden, policy makers can assess cost effectiveness of rotavirus vaccine and targeted age group for vaccination.