

Severe Winter Diarrhea Associated with Rotavirus Disease in Children

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Rotavirus is the leading cause of severe diarrhea in children under 5 years of age and is responsible more than 600,000 deaths in children annually with millions of hospitalizations. Due to limited access to proper health care, 95 percent of rotavirus related deaths occur among children in the developing countries including Nepal¹. In Asia, rotaviruses take the lives of 188,000 children, accounting for more than 40% of global rotavirus deaths².

WHO (2014) publication showed that 35% of Asian children hospitalized with acute diarrheal illness are infected with rotavirus³. Although rotavirus infection occurs throughout the year the prevalence was higher during winter season (60 to 70%)⁴. In Nepal, study conducted between 2007 and 2013; rotavirus infection was 30 to 50% and more than 60% strain circulated in winter and the most prevalent strain was G12P[6] followed by G2P[4] and G1P[8]^{5,6,7,8,9}.

Rotavirus infection is highly contagious and spreads easily from person to person through contaminated hands and objects. Rotavirus disease is difficult to treat with antibiotics or other drugs.

Mild rotavirus gastroenteritis can be treated effectively in the same manner as other forms of diarrhea, by oral rehydration therapy. However, children with severe rotavirus diarrhea lead to severe dehydration and often need intravenous fluids to prevent mortality. In developing countries including Nepal, this type of emergency health care is often inaccessible or unavailable, making rotavirus prevention through vaccination very important for preventing child mortality.

Vaccination is the best way to prevent severe rotavirus disease and the deadly, dehydrating diarrhea that it can cause. Improvements in water quality, hygiene, and sanitation stop bacteria and parasites that cause other forms of diarrhea but do not adequately prevent the spread of rotavirus infection. Life saving rotavirus vaccines should be introduced as part

of a comprehensive approach in control diarrheal disease, along with other interventions including oral rehydration therapy, exclusive breastfeeding, zinc supplementation and improvements in water and sanitation.

The surveillance data of Nepal on rotavirus^{4,7,8,10} provides good baseline information for policy makers in regards to rotavirus vaccine introduction. In addition, rotavirus vaccination if kept under national immunization program will not only save the lives of Nepalese children but also reduces rotavirus disease burden and economic thereby contributing to poverty reduction.

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