

Impact of Rotavirus Vaccination on Viral Gastroenteritis Diseases

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Background: Rotavirus infection causes a significant burden of diarrheal diseases in infants and young children leading to hospitalization and death. Rotavirus was a leading cause of viral gastroenteritis hospitalization among children less than the age of 5 years in Bahrain before rotavirus vaccine introduction in 2008.

Objective: To evaluate the impact of rotavirus vaccination program in the viral gastroenteritis admission among patients less than 5 years of age and to evaluate the incidence of intussusception.

Design: A Retrospective Data Analysis.

Setting: Salmaniya Medical Complex, Bahrain.

Method: Children aged less than five years hospitalized with acute gastroenteritis and intussusception based on international classification of diseases, tenth revision code, were included in the study. The patients were divided into two groups: viral gastroenteritis and intussusception; both groups were admitted to pediatric wards and reviewed from 1 January 2008 to 31 December 2012. The characteristics of patients with intussusception only were reviewed and analyzed according to age, sex, nationality and vaccination status. Patients less than five years of age with bacterial gastroenteritis were excluded.

Result: One thousand nine hundred fifty-five children under five years of age were hospitalized from 1 January 2008 to 31 December 2012. The first group consisted of one thousand nine hundred one patients, admitted with viral gastroenteritis. The second group consisted of fifty-four patients who were admitted with the diagnosis of intussusception. Thirty-seven (1.9%) were males, forty-three (2.2%) were Bahrainis and 11 (0.6%) were non-Bahrainis. No intussusception cases occurred within 31 days of Rotavirus vaccination.

Conclusion: The study revealed that children less than 5 years of age who were hospitalized for viral gastroenteritis have declined following Rota virus vaccine introduction and no reported intussusception with 31 days of vaccination.