

Rotavirus prevalence and seasonal distribution post vaccine introduction in Nairobi county Kenya

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Abstract

Rotaviruses are one of the leading etiological agents of gastroenteritis in young children, for which a monovalent G1P(8) vaccine has been provided for free in Kenyan since July 2014. The main objective was to estimate the post vaccine prevalence and seasonal distribution of rotavirus diarrhea in children less than 5 years in Nairobi County, Kenya. Rotavirus positive samples were collected from children below 5 years of age in two hospitals within Nairobi County where vaccination status was card-confirmed. The children were examined and the demographic and clinical profiles of the children were recorded. Fecal specimens were analyzed for rotavirus antigen using an ELISA kit, followed by characterization by PAGE. Out of the total 323 samples, 49 had detectable rotavirus infection, representing 15.2% prevalence. Age distribution of rotavirus prevalence was as follows: ≤ 6 months-8.5%, 7-12 months-27.4%, 13-24 months - 41.4%, 25-36 months - 16.4% while 36-65 months had 6.3%. Rotavirus diarrhea was more common in wet and cold months of the year, the highest prevalence being observed in August (24.5%), 12.3% in both July and March, while April scored a prevalence of 10.2%. Out of the 49 rotavirus positive children, 48 had vomiting and abdominal cramps while all had fever and watery stool. The prevalence of Rotaviral diarrhea in children less than 5 years in Nairobi County Kenya has greatly reduced following the vaccine introduction and is more common during the wet and cold seasons of the year.

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