

Preparing for safety monitoring after rotavirus vaccine introduction: epidemiology of intussusception among children <1 year of age in a Nigerian Teaching Hospital

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Background

Public health impact of rotavirus vaccination could be substantial in settings like Nigeria, where diarrhea-related morbidity and mortality is high. Assessment of the baseline epidemiology of intussusception will be useful for policy makers in making decisions about vaccine introduction. The aim of this study is to describe the epidemiology of intussusception-associated hospitalizations among children <1year in Ilorin, Nigeria

Method

Retrospective hospital-based chart review of cases of intussusception occurring between January 2015 and August 2018 and prospective, active surveillance for intussusception-associated hospitalizations between September 2018 and March 2019. Hospitalized children under 1year of age were identified according to Brighton Collaboration level 1 criteria for intussusception.

Results

Over a 51month study period, 42 confirmed cases were identified. These cases represented 5.3% of all surgical admissions under 1years of age. Twenty-three cases (54.8%) were male; the median age was 7months; and the median duration of symptoms was 72hours. The most frequently observed signs or symptoms of intussusception included vomiting 38(90.5%), bloody stool 36(85.0%), fever 33(78.6%) and abdominal pains 28 (66.7%). The diagnostic methods used included abdominal ultrasonography 40(95.2%) or/and confirmed at surgery in 34(81%). A majority 35(83.3%) of the patients required surgery for treatment; 60.0% of those who underwent surgery required bowel resection. Ultrasound guided hydrostatic reduction was successful in 7(16.7%) patients. Wound infection occurred in 14(33.3%) patients. A total of 5(11.9%) deaths occurred, including 2 deaths in infants aged 0-6 months. The median length of hospital stay was 7.0 (range 1-34) days.

Conclusion

Confirmed cases of intussusception represented 5.3%% of paediatric surgical admissions at tertiary referral centre in Nigeria during the study period, most of patients required surgical intervention and about 12% of children with intussusception died. These baseline data will be useful for post-rotavirus vaccine introduction safety monitoring.