Epidemiology and rotavirus strains circulating in children under five years of old before and after vaccine introduction in Mozambique

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Mozambique introduced monovalent rotavirus vaccine (RV1) into its childhood immunization schedule in September 2015. We aimed to assess the impact of the vaccine in the prevention of infection and in the diversity of RVA genotypes before and after the introduction of the vaccine in Mozambique. We carried out a descriptive cross-sectional study in children under five years of age hospitalized with acute diarrhea in the Pediatric Services of Maputo Central Hospital between 2013 and 2018. eight hundred and two samples of feces were collected during the pre-vaccination period (2013 - 2015) and 196 in the post-vaccination period (2016 - 2018), where a median reduction of 76% of cases of hospitalization for diarrhea was observed, decreasing from 28.7% (82/284) in the prevaccine period to 15.5% (10/66) in the post-vaccination period, ($p < 0.05$) in all age groups. Similarly, there was a median reduction of 53.89% in the proportion of hospitalization for rotavirus diarrhea in children <12 months of age, from (28.29%) in the pre-vaccination period to 13.04% in the post-vaccinal. After the introduction of the vaccine, there was a change in the usual seasonal peaks. The most prevalent combinations of rotavirus genotypes in the pre-vaccine period were G2P[4] in 2013 62 (72%), G1P[8] 31 (65%) in 2014, G9P[8] 48 (69%) in 2015 and in the post - vaccination period were: G1P[8] 5 (50%) in 2016 and (62.5%) in 2017; G3P[8], G3P[4], G4P[6] 1 (33%) in 2018. In Mozambique, after the introduction of the rotavirus vaccine, a reduction in rotavirusassociated hospitalizations it can be seen in all older age groups mainly in children <12 months of age. A wide variety of rotavirus strains circulated in the pre- and postintroduction periods of the vaccine. The results of this study support evidence of the impact of rotavirus vaccination highlighting the importance of program continuity as well as monitoring studies of rotavirus genotypes following the introduction of the vaccine in Mozambique.