

# Emerging of G3 and G9 strains of rotavirus a in children under 5 year with diarrhea in Mozambique: annual report, 2018

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## Introduction

Rotavirus is the leading cause of acute gastroenteritis in children worldwide. Significant reductions in the frequency of rotavirus infection have been reported since the introduction of Rotarix<sup>®</sup> vaccine in September 2015, 12.2% (53/433) in 2016 and 13.5% (24/178) in 2017, respectively. It is important to monitor the strains annually in the country to detect unusual strains and fluctuation each year. This short report aims to describe the G and P genotypes of rotavirus strains that infected children under 5 years in Mozambique in 2018.

## Materials and methods

Using the platform of the National Surveillance of Acute Diarrhea, fecal samples were collected from children under 5 years, hospitalized for acute diarrhea in the pediatrics of 6 sentinel sites. The samples were tested by ELISA (Prospect EIA rotavirus, United Kingdom) and the positive samples genotyped by RT-PCR. The data analysis was done through SPSS version 20.

## Results

A total of 282 stool samples were collected and tested by ELISA. The frequency of rotavirus was 17% (48/282). Genotypic analysis of the 46 positive samples (excluded 2 cases without sample) revealed that G3 and G9 were more frequent with 54.3% (23/46) and 17.4% (4/46) respectively. The most frequent combinations were: G3P[4], 34.8% (16/46) followed by G3P[8], 17.4% (8/46) and G9P[6] 8.7% (4/46). No G1P[8] combination was observed like in 2017. Analysing the children vaccination status: 85.3% (29/34) belonged to children who received two doses, 2.9% (1/34) received one dose and 11.8% (4/34) were not vaccinated.

## Conclusion

Genotypes G3 and G9 were most frequent in 2018. Continuous surveillance of circulating genotypes and full genome sequencing will be important to provide more information about the impact of rotavirus vaccines on rotavirus strain diversity in Mozambique.

**Key words:** rotavirus, G3 and G9 genotypes.