

Decline in cases of rotavirus diarrhea and the severity of dehydration in children under 5 in Abidjan after the introduction of Rotateq

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Introduction

Rotavirus diarrhea in Côte d'Ivoire, like developing countries, is a major cause of mortality and morbidity. The surveillance started since 2010 has allowed the introduction of the vaccine in March 2017 into the routine immunization program. Objective: To estimate the prevalence of acute rotavirus gastroenteritis in children under 5 in Abidjan during the pre- and post-vaccination periods (2010-2016 and 2017-2018) as well as their degree of dehydration during the same periods.

Materials and Method

We conducted a cross-sectional observational study based on the rotavirus diarrhea surveillance database of the sentinel site of the Yopougon University Hospital in Abidjan. We conducted the analysis of all Rotavirus diarrhea between January 2010 and December 2018 by determining the pre-vaccination (2010-2016) and post-vaccination (2017-2018) periods.

Results

During the period there were 1863 data including 1507 in pre-vaccine and 356 in post-vaccine were recorded. We observed a male predominance with sex ratio at 1.3 and a median age which was 9 months. The prevalence of Rotavirus diarrhea increased from 32% in the pre-vaccine period to 20% after the introduction of the vaccine. Cases of severe dehydration among registered diarrhea cases increased from 7.4% to 0% after vaccine introduction. Regarding the serotypes P [8], was predominant in prevaccinal (45%) however in the post-vaccination period we observed a predominance of mixed genotypes (P [8], P [6] and P [6], P [4] [8]) in 35% of cases. Also concerning G, the G1 remains prevalent both during the two periods with nearly 50%.

Conclusion

The prevalence of Rotavirus diarrhea has decreased after the introduction of pentavalent Rotavirus vaccine in children. Ongoing monitoring is important to document the impact of Rotavirus on the burden of disease in Côte d'Ivoire