

Surveillance of rotavirus diarrhea on the sentinel site of the pediatric hospital of Kalembe Lembe (DRC) between 2009 and 2018

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Introduction

Rotavirus diarrhea is a major public health problem in the DRC. According to WHO statistics, the disease causes per year at least 1664 deaths of children under 5 years old worldwide. The greatest burden of the disease lies with young children in the countries of sub Saharan Africa. In view of the above, the extended EPI vaccination program, with certain partners and funders, has undergone a study in 2009 to determine the incidence of this disease, identify the strains circulating in the DRC and introduce a new vaccine that could reduce the impact on the young population.

Methodology

We focused on children from 0 to 5 years old having attended the Paediatric Hospital Kalembe Lembe between August 2009 and December 2019 and who showed signs of acute diarrhea of less than 7 days and of vomiting and fever.

To confirm the diagnosis of rotavirus infection, two tests were performed on stool samples from 2020 cases.

Results

From August 2009 to December 2018, 2028 cases of severe acute diarrhea were reported. 2020 stool samples were collected and analyzed using an immunological test for rotavirus. 1.094 samples were rotavirus positive (66%). Including 4 genotypes found are: G2P4: 0.8%; G1P6 4.9% G2P6: 7% G1P8: 36%

The first graph shows that from about 1664 cases of rotavirus diarrhea analyzed, 1.094 cases were confirmed positive (66%), 553 were negative(33%) and 17 cases were inconclusive (1%).

It is to be noted that about 66% of all cases of children (0 to 5 year old) hospitalized for severe acute diarrhea are attributed to rotavirus infection in our sentinel site, with a predominance of G1P8 monitoring G2P6, G1P6 and G2P2.

Conclusion

The results demonstrate the need to introduce the vaccine against rotavirus in the country to help reduce the high rate of hospitalization and mortality of children under five, due to rotavirus diarrhea within the country.

As we now know the seasonal occurrence as well as the periodicity of the outbreak of rotavirus diarrhea, it is possible to establish a much more accurate vaccination schedule. This may result in mastery and eradication of the disease throughout the whole territory of the Democratic Republic of Congo, and then even in all of Central Africa.