Circulation of Rotavirus Genotypes strains in the Democratic Republic of Congo, 2013-2017: Implications for the vaccination

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Background

Rotavirus gastroenteritis remains a major cause of morbidity and mortality among young children.In Democratic republic of Congo (DRC), Although the previous study showed a high burden of rotavirus hospitalization (around 60%) in hospitalized children <5 year old with acute gastroenteritis and a considerable variation of rotavirus strains circulating each year, the rotavirus vaccine is not introduced in theExpanded Program on Immunization.

Aim: The aim is this study is to determine thecirculation of rotavirus genotypes in DRC from 2013 to 2016.

Methods

Between 2013 to 2016 stool specimens were collected fromchildren <5 year old hospitalized for gastroenteritis within 48hours of hospital admission in the 3 sentinel sitesacross DRC (2 sites in Kinshasa and 1 Site in Lubumbashi. The Elisa test usedfor detection of group A rotavirus Antigen in the sentinel site lab. For the ELISA positive samples, the genotyping assays on the rotavirus samples positives were performed using multiplex reverse transcription chain reaction (RT-PCR)at INRB laboratory.

Results

During the study period, 1830 stools samples were screened for rotavirus by EIA and 988 were positive (54%). The seasonality of rotavirus was determined between April and August from 2013 to 2016. The genotype was identified for 494 (50%) samples. The most common genotypes found were G1P [8] (32%), G2P [6] (23%) ,G1P[6] (17%), G2P[4] (4%).

Conclusion

This survey showed that in the absence of rotavirus vaccine, high variability of rotavirus strains genotypeduring the study period and its seasonality. It is essential to continue the surveillance of Rotavirusin order to determine when the introduction of rotavirus vaccine the impact of this vaccine on rotavirus burden,strain change and diversity in DRC.

Mots clés: Rotavirus, Genotypes, Circulation, DRC