

Letter to Editor

Monitoring Sentinel of Diarrhoea a Rotavirus in The Site of Hospital Complex Pédiatrique of Kingasani Ii 2009-2014

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Introduction

After paludism, respiratory infections, and meningitis, the severe diarrhoea belongs to the major causes of the problems of public health in the whole world. According to current statistics of WHO, this disease cause at least 483 000 deaths of children from zero to 59 months per annum in the world. The children whose above mentioned age, are victims permanent of this very fatal disease. Let us announce by here that the vaccine against the gastro entérite with rotavirus is already operational in certain developed countries whose principal objective remains that to reduce its incidence.

In addition, no one is not unaware of that the diarrhoea with rotavirus remains one of the concerns paramount among the problems of public health in the countries under developed and sends development; they is the cases in particular of the Latin America and certain sub-Saharan countries of Africa. At strong present remains to draw the alarm bell near the authorities' politico medical and administrative on all the levels in order to make a plea with close to the backers for establishment again vaccine with rotavirus especially in the countries with strong incidence of this cruel disease (case of the RDC). This will permettreraï to reduce the incidence.

By way of recall, it ya place to announce by here that it is since 2009 that the ministry for the public health of the RDC, via its program widened of vaccination (PEV) with the support of the certain partners and financial backers of the bottom had made the installation of a study on the incidence of this disease. To be made the best strategy adopted unanimously by all the fascinating parties which had at the time of this resolution was to target three sites sentinels with knowing: our paediatric hospital complex of KINGASANI II, and the paediatric hospital of kalembe lembe for the pool of Kinshasa, y compri the hospital sendwe of Lubumbashi. Still let us announce that the choice operated for the adoption of these three hospital sites was based following their expertises and specialities in the sick assumption of responsibility of the children. To clarify the impact of the monitoring of the various cases recorded in our service of pедиатry, we will indicate here the data collected in the children from 0 to 59 months to hospitalize for the cases of the diarrhoea with rotavirus.

General Objective

The objective defined in our study is this him to determine the circulating stocks of the diarrhoea with rota virus in RDC for the choice of the type of vaccine against the rota virus in order to ensure the exact assumption of responsibility according to standards of WHO as well in RDC as under area of Africa Centrale.

Strategies

For that purpose, three sites sentinels were established in the two principal cities of the country of the RDC after an evaluation carried

out by the ministry for the public health through its Program Widened of Vaccination (PEV). Thus, our hospital complex Pédiatrique of KINGASANI II was retained thanks to its expertise very marquable because no one is not unaware of that this center records many patients that following his geographical situation. For information purposes, this center is the single one in its kind established in the commune of Kimbanseke most populated on the 24 communes of the town of Kinshasa. Equipment was installed and our focal point is composed of the clinicians, the medical biologists and the basic managers of data,

The Program widened of vaccination coordinates our activities of monitoring in collaboration with the national institute of biological research (INRB). WHO, the CDC and the Bill Foundation and MELINDA GUET inside project SURVAC financed our activities. On the level of the site sentinel, there is a coordinator who manages the resources and the data of monitoring as of these three operational units (a service of nursing for the inclusion of the cases, a laboratory of site to carry out the examination recommended, and a manager of the data). The laboratory of the site works in close cooperation with the national laboratory (INRB), the regional laboratory of reference, the WHO of the Mendusa University, Limpopo, and the world Laboratory of CDC Atlanta, which help with the génotypage, the séquençage and the examinations of quality control.

Methodologies

It is about an exploratory study based on semi direct talks structured with the parents of the children patient in our paediatric service. I.e. we sought with close to these parents the criteria of inclusion of the various recorded cases. The targets of our monitoring are the children from 0 to 59 months dealt with during our period of investigation in the paediatric hospital complex of KINGASANI II, whose population of this surface of health amounts to 236.584 in this the children having suffered from the diarrhoea with rotavirus account for 55% of the population.

Sample

Being given that the population is the whole of the inhabitants of a given space or the whole of the people constituting in a space given a particular category, or a whole of individuals concerned with the objective of a scientific research, our sample is composed of all the

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old children from 0 to 59 months and being dealt with following this disease in the paediatric hospital complex of KINGASANI II. And this sample is of 1204 children.

Criterion of Inclusion

Unit of study:

- They is all the sick children from 0 to 59 months hospitalized with the paediatric service for the gastro entérite in our structure.
- Children suffering from the gastro entérite from less than 7 days

Criterion of Exclusion

Are excluded in this study

- All the children whose age is higher than 5 years; children whose age is higher than 59 months hospitalized for the gastro entérite with diarrhoea beyond 7 days;
- Any children hospitalized for other pathology that the gastro entérite.
- For one or another reason any child at the age of inclusion of case whose sample of saddles was not taken at the time of its hospitalization.
- The gastro entérite in the children badly nourished.

Laboratory

Our paediatric hospital complex of KINGASANI II especially has a laboratory with a service of virology for the monitoring rotavirus because it records several cases per month. To confirm the diagnosis of infection to rotavirus it ya two tests and is always recommended for the monitoring. The ELISA is carried out in our site of reference or regional with a quality control carried out by INRB. The PCR for the génotypage is carried out at the national laboratory of reference (LNR) of INRB, Kinshasa/RDC, at the regional laboratory of reference (RRL) of University MENDUSA, and at the world Laboratory of reference (GRL) of CDC Atlanta, the USA.

Management of The Data

The clinician's members of the site identify the patients and fill a form with investigation for each case admitted with severe acute diarrhoea. This form is filled at the laboratory of the site with all the results of the tests then turning over to the clinicians for the follow up of the patient to the exit before sending them to the manager data in order to compile them then to send to the managers of the PEV again, the INRB, and WHO. The analysis is carried out on each level.

Presentation of Result

During last five-year period, the monitoring of the rotavirus progressed in our paediatric hospital complex of KINGASANI II quite simply by the sampling of saddles and the test of analysis ELISA, but also the presence of a personnel motivated and trained in the site can explain this success. Since August 2009 until December 2014, we have enregistré 1204 severe case of the diarrhoeas acute. IT remains to be announced by this fact that all these samples of saddles were taken and analyzed by an immunological test for the rotavirus, and 656 samples were rota virus positive (55%).

Graphic Presentations Figure 1, Table 1- 4

Discution of The Study

We affirm that during last five-year period on the monitoring of the cases of infection with positive Rotavirus of the ELISA, within our paediatric hospital complex of KINGASANI II, all the cases of serious acute diarrhoeas in the children from 0 to 59 months hospitalized on our premises are always more than 50% compared to the remainder

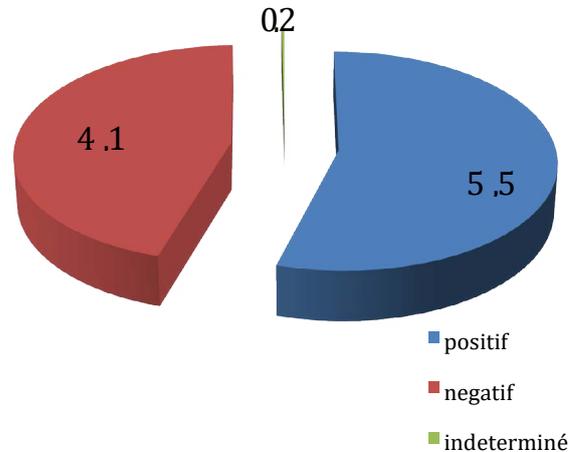


Figure 1: Graphic Presentation.

Note: IT arises in this chart that on 1204 cases of the diarrhoeas with rotavirus analyzed in our service, we find that 657 cases have were to confirm positive is 54,57%; screw-A-screw 544 negative cases is 45,1%;and 3 cases had as unspecified result is 0,25%.

of the recorded cases.

In our paediatric hospital complex of KINGASANI II the monitoring sentinel for Rotavirus had begun in 2009 in August as the remainder from the sites sentinel. However, since there until October 2014, we with recorded 1204 cases of acute gastro-enteritis and were included among the data recorded in the national monitoring system.

In connection with the periodicity, the months of transmission most indexed with this very fatal infection with KINGASANI II, are given from May, April, June, July and August of each year because it east is the months which characterize the dry season with the which viral change is very increasing and active contrary to remain months. This assure us again that the saisonnality plays a very essential role in the notification of the cases of gastro entérite in Rotavirus.

This explains the higher contribution of infection by the diarrhoea with Rotavirus causing more mortality in the children from 0 to 59 months in Democratic Republic of Congo.

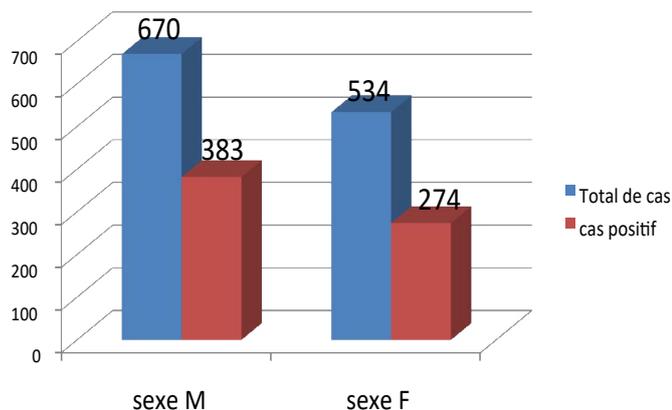
There is a great diversity of the circulating stocks of Rotavirus, which changes with the wire of time. The analysis of génotypage makes in the laboratory regional of MENDUSA in South Africa detected the stocks more raised of P[8], G2P6 and of 2009 to 2014.

Conclusion

In our study 55% of the cases of the children hospitalized for the diarrhoea with rota severe virus those whose age varies between 0 and 59 months is allotted to a Rotavirus infection in our site sentinel. The results show the need for introducing the vaccine against the gastro entérite in Rotavirus into our country to help to reduce the high rate of prévalence and mortality of the children from 0 to 59 months without being unaware of the deaths due to this same disease.

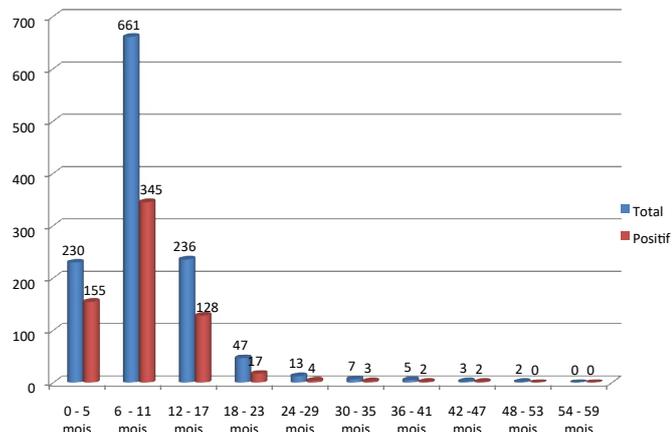
Being to give that the saisonnality constitutes the high period of the cases of the diarrhoeas with Rotavirus, it is possible to introduce the vaccine so that it has a synchronization with total cover through all the extent of the country. This could involve the maitrise in a time record and allow éradiquer the disease on all the national extent to see even in all the area and under area of Africa Centrale. This study is a great stage in our activities within our paediatric hospital complex of KINGASANI II since a case of an epidemic constitutes an international threat henceforth.To reach that point we will remain largely open through your remarks, criticisms and suggestions to improve our future publications.We reaffirm through this article

Table 1: Distribution of the cases of gastro enterite a rotavirus according to the sex in hospital complex pediatrique of KINGASANI II.



Note: The prevalence of rotavirus is more among young boys than in girls.

Table 2: Distribution of the cases of gastro enterite a rotavirus by age bracket in hospital complex pediatrique of KINGASANI II.



Note: The distribution in age bracket in this table informs that the positive cases of the severe gastroentérites acute are noted more in the children of 0 with 17mois with their figures respective of: 155 positive cases for those from 0 to 5 months, 345 for those from 6 to 11 months and 128 for the age bracket de 12 in 17 months.

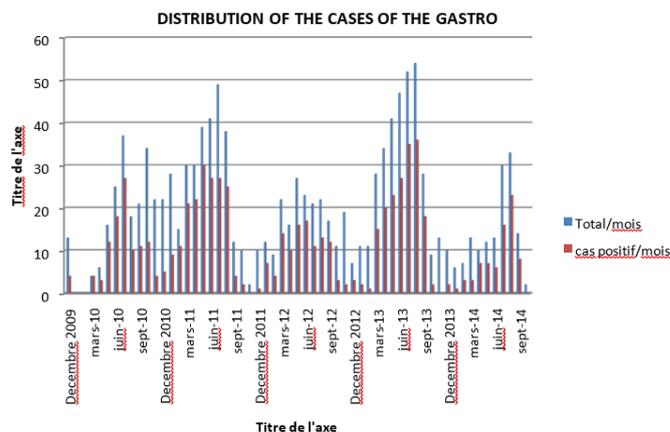
that in the near future, we could be able already to publish another article on paediatric meningitis in the children from 0 to 59 months. Knowing well that a meticulous study on the métrise and the best dealt with of the case of bacterial meningitis paediatric in the children of which questions.

Thanks

Our most sincere thanks first of all address to the congregation sisters the poor of Bergamo to the occurrence of sister higher CLELIA SUDIRO RENATA for its personal implication in the activities of monitoring within our institution.

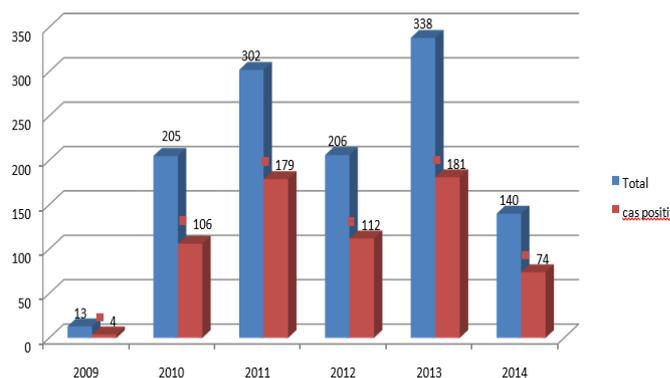
We thank in the same order for idea the team for WHO in the person for: Dr. Adolph KONGOLO, Vital MONDONGE and Mr. Albert MBULE who in spite of their occupations multiple it are

Table 3: Distribution of the cases of the gastro.



Note: This table indicates the determination saisonnality of the disease and the experiment shows that it is during the dry season that we record more of the cases of the diarrhoeas with rotavirus as indicates it June, May, July and August in the graph. This Ci could be explained by the fact that during the season the climate dries is cold in Kinshasa especially with KINGASANI II, occasion by which it ya strong viral permutation on both sides.

Table 4: distribution of the cases of gastro enterite a rotavirus according to prevalence's of 2009 a 2014 in hospital complex pediatrique of KINGASANI II.



Note: We can explain in this table that in 2009 the center had recorded 30, Commentaire: 8% of the cases of the diarrhoea with Rotavirus, in 2010 the score carried out were 51,7%, while in 2011 the figure increased to 59,3% to still drop in 2012 to 54,4% then a light modification of reduction in 2013 with 53,4% of the cases and the end of 52,9% in 2014.

troubled to frame us with the better result of this study.

IT will be very ungrateful for us of not reconnaitre the heavy contribution of our various actors in their title and quality respective, to have taken part completely so that this study is born it acts of the team of which above-mentioned names.

Our gratitudes are right with the various authorities of the INRB in particular to Professor Doctor MUYEMBE, Mrs Berth MIWANDA, Mrs. Elie PUKUTA and Mr. Jean Claude TSHANGA TSHANGA but for their marvellous framing. In end we hold to pay our homages to Mrs DIANE WANKU, Mrs LILA RALISON, Mr MATHIEU of which we would not be ungrateful if we will finish this exposure without referring has their expertise how much very creditable.