Knowledge and Practices of Mothers about Rota Vaccine in Al Matama Locality, River Nile State, Sudan

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Abstract:

A descriptive cross-sectional community-based study was conducted in Al Matama locality during the period extend from (2013-2015).The study aimed to stand on knowledge and practices of mothers about rotavirus vaccine. Two hundred and ten mothers were selected using systematic sampling techniques and the WHO Cluster Sample Manual. Data of the study variables were collected using a pre-prepared questionnaire, and the results presented in form of tables and graphs. The study revealed that 83.3% of the mothers completed Rota vaccine doses for their children, and those did not complete Rota vaccine doses due to neglect and laziness of mothers. The results showed that 66.2% of the mothers got their knowledge about rotavirus from the health center through immunization technicians. All mothers were knowledgeable about the importance of vaccination, and 98.6% of the mothers had vaccination cards for their children. Most of the mothers (77.1%) vaccinated their children in the fixed strategy. All mothers know that vaccination had side effects, and 66.8% of mothers their children had side effects after vaccination such as fever. The study recommended that vaccination technicians continue to deliver basic messages of vaccination to mothers and beneficiaries during the sessions. Training staff to improve their skills for effective communication, and this will help to increase awareness of mothers about vaccination.

Keywords: Immunization, Knowledge, Mothers, Practices, Rotavirus, Vaccine

INTRODUCTION

A recent study estimated that there are 3.6 million episodes of rotavirus disease annually among the 23.6 million children under the age of five, living in the European Union, with 231 deaths, more than 87,000 hospitalizations and about 700,000 primary care consultation,(2).

Rotavirus gastroenteritis is the most common cause of acute dehydrating diarrhea among children younger than 5 years and globally the most important cause of severe diarrhea in this age group. Most children acquire rotavirus infection before they turn2 years of age. Rotavirus is highly infectious, and if one child is infected all children be around are easily get the infection. Symptoms appear around 2 days after infection. The person is not infectious during that period. When illness appears, the person excretes large quantities of the virus in the feces and vomit, and this creates difficulty in avoiding transmitting the virus to other people, Traditional means of preventing transmission such as thorough hand washing are not sufficient to avoid transmission of rotavirus, and applying alcohol rub sanitizers to the hands has no effect. The severity varies from complete absence of symptoms to severe disease including hospitalization with the need for intravenous fluids. The illness usually lasts about 1 week. (3).

Rotavirus vaccines play an essential and life-saving role in comprehensive diarrhea control strategies. A coordinated approach that combines rotavirus vaccines with other prevention and treatment methods, including oral rehydration therapy, zinc, breastfeeding, improvements in water, sanitation, and hygiene as well as proper nutrition, will achieve the greatest impact on diarrheal disease mortality and morbidity (deaths and hospitalizations In developing countries, where the toll of rotavirus is devastating, GAVI's support for the affordable and financially sustainable introduction of rotavirus vaccines in national immunization programs is making a significant impact on global efforts to achieve Millennium Development Goal. Two orally administered rotavirus vaccines Rotarix® and RotaTeq®, are available today. Both vaccines have been shown to be safe and effective in

clinical trials in Africa, Asia, Europe, Latin America and the United States, [4]. Clinical trials in Africa(Ghana, Kenya, Malawi, Mali, and South Africa) found that rotavirus vaccines reduced severe rotavirus disease by more than 60 percent during the first year of life, when children are at the greatest risk for severe rotavirus diarrhea,[5].

Rotavirus is the global leading cause of severe childhood gastroenteritis, responsible for an estimated two million hospitalizations each year and approximately 527,000 (475,000–580,000) child deaths in 2004. The majority of rotavirus-related deaths are in the developing world [6]. A recent study estimated that there are 3.6 million episodes of rotavirus disease annually among the 23.6 million children under the age of five, living in the European Union, with 231 deaths, more than 87,000 hospitalizations and about 700,000 primary care consultation,[2].

The present study aimed to stand on the status of knowledge and practices of mothers regarding rotavirus vaccination at Almatama Locality, River Nile State, (2013-2015).

Methods and material

The study populations included the mothers with at least have one child at the age of 12-23 months. EPI cluster sampling technique was the method used for sampling. A survey done in 30 systematically selected cluster of seven or more children to estimate the immunization coverage of all children that live in the areas being surveyed. The total number of the mothers selected for the study was 210,

(10, (17), , (18).

The data was collected systematically using questionnaire for mothers.

Tables and figures were used to present the results.

Ethical consideration

The data collection started after taken consent from Al Matama locality health authorities and mothers.

Results

Table (1): distribution of mothers according to their educational level and income.

Educational level	Frequency	Percentage (%)
Illiterate	19	9.0
Primary	42	20.0
Secondary	66	31.4
University	83	39.6
Total	210	100
Income level	**Frequency**	**Percentage (%)**
Low	20	9.5
Middle	141	67.1
High	10	4.8
No income	39	18.6
Total	210	100.0

Table (2): distribution of mothers according to their knowledge about importance of vaccination, source of knowledge about Rotavirus vaccine, and Rota vaccine is against diarrhea.

The importance of rotavirus vaccination	Frequency	Percentage (%)
Important	210	100
Not important	0	0
Total	210	100
Source of knowledge	**Frequency**	**Percentage (%)**
Media	11	5.2
The vaccination center	139	66.2
0ther mothers	52	24.8
Else	8	3.8
Total	210	100.0
Rota vaccine is used against	**Frequency**	**Percentage (%)**
Diarrhea	114	54.3
Not diarrhea	96	45.7
Total	210	100.0

Table (3): distribution of mothers according to vaccination card, reasons of child without vaccination card, and vaccination place.

Has vaccination card	**Frequency**	**Percentage (%)**
With card	207	98.6
Without card	3	1.4
Total	210	100.0
Reason of not has a vaccination card(At time of visit)	**Frequency**	**Percentage (%)**
Loss card	1	33.3
Damage Card	2	66.7
Not receive a card	0	0
Total	3	100.0
Place of vaccination	**Frequency**	**Percentage (%)**
Fixed center	162	77.1
Outreach center	40	19.0
Mobile Team	8	3.9
Total	**210**	**100.0**

Table (4): distribution of mothers according to their knowledge about number of Rota vaccine doses, specific age to receive the first and second dose of Rota vaccine.

Number of doses	**Frequency**	**Percentage (%)**
One dose	3	1.4
Two doses	95	45.2
Three doses	27	12.9
I do not know	85	40.5
Total	210	100.0
The age to receive first dose of Rota vaccine	**Frequency**	**Percentage (%)**
Since birth	59	28.1
40 days later	95	45.2
After two months	50	23.8
After 4 months	6	2.9
Total	210	100.0
The age to receive second dose	**Frequency**	**Percentage (%)**
A month after the first dose	118	56.2
Within eight months of the child's age	39	18.6
After eight months of the child's age	53	25.2
Total	210	100.0

Tables (5): distribution of mothers according to completed doses for their children, and reason to uncompleted vaccination of Rota vaccine.

Completed doses	**Frequency**	**Percentage (%)**
Completed doses	175	83.3
Not completed doses	35	16.7
Total	210	100.0
Reasons of uncompleted Rota vaccine doses	**Frequency**	**Percentage (%)**
Not aware of the importance of vaccination and completing doses	6	17.1
Fear of side effects	8	22.9
The child is sick	1	2.9
Neglect and laziness of the mother	13	37.1
Distance from the vaccination center	3	8.6
Others	4	11.4
Total	35	100.0

Tables (6): distribution of mothers according to their knowledge about Rota vaccine causes side effects,

type of side effects of Rota vaccine, and their management.

Rota Vaccine causes side effects	Frequency	Percentage (%)
Causes side effects	210	100.0
Not causes side effects	0	0.0
Total	210	100.0
Type of side effect	**Frequency**	**Percentage (%)**
Diarrhea	8	24.2
Vomiting	3	9
Fever	22	66.8
Headache	0	0
Total	33	100.0
Dealing with side effect	**Frequency**	**Percentage (%)**
Going to the health center	13	39.4
Home Care	16	48.5
Nothing to do	4	12.1
Total	33	100.0

Discussion

9.5% of mothers their income level was low, as in table (1), I think this not enough income lead to increased exposure children to diarrhea, and this agrees with [11],"Children in low income countries acquire the infection early during the first year of life".

All mothers (100%) said vaccination was important, as in table (2), this attributed to most mothers received messages from vaccinators in health centers, and spread of health awareness among members of community, and this agrees with [12], "Health education and mass mobilization of the community are essential not only to increase the coverage but also for the timely receipt of vaccines".

98% of the mothers have vaccination cards for their children as in table (3), and this due to received messages within sessions about importance of vaccination card, and this agrees with [12], "The only record of immunization history and status available for health workers if the facility registers do not exist or if clients move from one health facility to another".

77.1% of the mothers immunized their children in fixed strategy as in table (3), because the immunization program depends on the service sustainable throughout the week, conversely out-reach and mobile team strategy which were monthly Sessions, this agrees with, [12], "Fixed site give services available about 5km of area"

100% of the mothers occurred to their children side effects of Rota vaccine as in table (3), and this agrees with [13], [14], "like any medicine; there is a chance of side effects". 66.8% of the side effects was in the form of fever as in table (6), and this agrees with [13], [15], [16] "Some problems have been associated with rotavirus vaccine irritable, or have mild, temporary diarrhea or vomiting after getting a dose of rotavirus vaccine".

Conclusion

The study concluded that a large number of mothers had knowledge of the age specified for rotavirus vaccination, as well as the timing of doses and side effects of vaccination. And also the study showed that children happen to them some side effects after vaccinated by Rota vaccine.

Recommendations

Continue to communicate the basic messages of vaccination by the vaccinators to mothers, beneficiaries through the various vaccination sessions.

Training the staff on immunization program by local officials to improve their skills for effective communicating with community leaders, politicians, executives, people committees, this will help to increase awareness, coverage and reduce the percentage of defaulters in the locality.

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