

Knowledge of immunization technicians about Rota Vaccine in Al-Matama Locality, River Nile State, Sudan

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Abstract

A descriptive cross-sectional study was conducted among the immunization technicians in health centers of Al-Matama Locality, River Nile State, Sudan, during the year 2017. All of the technicians (20) in the immunization health centers in the locality were included (10 centers). Results revealed that 40% of the participants have experienced between 8-12 years and 90% of them found trained on the rotavirus vaccine. The participants knowledgeable on the rotavirus vaccine consist was 10% for a virus separated from its toxins, 15% for a genetically modified virus and 75% for a live attenuated virus. Likewise, their knowledgeable on the methods of prevention of rotavirus was 5% by washing hands, 5% avoiding overcrowding during the season of the spread of the disease, 30% vaccination using rotavirus vaccine and 60% that all mentioned are true. All of the participants found knowledgeable about the targeting age, besides most of them are aware of the number of vaccine doses, how it can be applied and the side effects. In conclusion, training the staff on the immunization program will improve their skills, increase their awareness and reduce the percentage of defaulters in the locality.

Keywords: Knowledge, technicians, rotavirus, Al-Matama Locality.

Introduction

Immunization programs have a major impact on the health status of the population. In Sudan, the expanded program on immunization (EPI) was launched in 1976; it has introduced the six traditional EPI antigens ^[1]. EPI introduced vaccination in Al-Matama Locality since 1986 ^[2]. The rotavirus vaccination program started in Sudan in 2011; as the first African country to introduce rotavirus vaccines with funding from the global alliance of vaccines and immunization (GAVI) ^[1].

Diarrheal diseases are still a major cause of mortality and morbidity in children, particularly in developing countries ^[3]. Rotavirus is the most common cause of

acute gastroenteritis and the leading cause of severe dehydrating diarrhea in infants and young children. In Europe, every child is expected to experience episodes of gastroenteritis during the first three years of life. A recent study estimated that there are some million episodes of rotavirus disease annually among children under the age of five in Europe ^[4].

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 turn 2 years of age. The severity varies from a

complete absence of symptoms to severe disease including hospitalization with the need for intravenous fluids. The illness usually lasts about 1 week. Rotavirus is highly infectious, and if one child is infected the other children easily get the infection. 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 does not affect. 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 ^[1].

The first rotavirus vaccine was tested in 1983, and the success of these trials laid the groundwork for the current strategy for vaccine development. A single oral dose of a live vaccine prepared from bovine rotavirus was effective in preventing clinically significant rotavirus diarrhea in about (80%) of vaccinated Finnish infants ^[5]. Globally, rotavirus is the main cause of severe childhood gastroenteritis, responsible for an estimated two million hospitalizations each year, and the majority of rotavirus-related deaths are in the developing world ^[6].

This study aimed to identify the knowledge of immunization technicians in health centers about the rota vaccine in Al-Matama Locality, River Nile State, Sudan.

Materials and methods

A descriptive cross-sectional study was conducted among the immunization technicians in health centers, in Al-Matama Locality, River Nile State, Sudan, during the year 2017. Al-Matama Locality located between latitude 16 south and 17 north and longitude 32 west and 33.40 east, with a total area of about 11723 Km². Children under five years are about 4783 ^[7], and a total population of 183080 ^[8]. This locality divided into three administrative units (Wad hammed, Tayba and Al-Matama). The most important economic activities include farming, grazing and trading. The climate is a semi-desert with a very cold winter and hot summer with a few spots of rain in autumn ^[2]. All of the technicians (20) in the immunization health centers in the locality were included in this study (10 centers). The survey was conducted after taken consent from Al-Matama Locality health authorities.

Data was collected using a closed questionnaire and was analyzed using the statistical software, SPSS version 18 for Windows.

Results and discussion

This study revealed that 40% of the participated vaccinators have experienced between 8-12 years; this indicates the stability of the vaccinators in their work for a long time and stability in their job, which increases their accumulated experience in

the field. Most of the participants (90%) found trained on the rotavirus vaccine; this is likely to the policy of the immunization program trains for vaccinators been held in the area. The participants knowledgeable on the rotavirus vaccine consist were 10% for a virus separated from its toxins, 15% for a genetically modified virus and 75% for a live attenuated virus. Previously it has concluded that a single oral dose of a live vaccine of rotavirus was effective in preventing diarrhea in infants [5]. The participants knowledgeable on the methods of prevention of rotavirus were 5% by washing hands, 5% avoid overcrowding during the season of the spread of the disease, 30% vaccination using rotavirus vaccine and 60% that all mentioned are true. This finding reveals that all of the participants are aware of the disease prevention methods and this is in line with previous results that rotavirus vaccines play an essential and life-saving role in comprehensive diarrhea control strategies [9].

Besides, all of the participants found knowledgeable about the targeting age (from 6 -15weeks for the first dose and 32 weeks for the second dose). This is in line with the WHO recommendation that the first dose of rotavirus vaccine be administered as soon as possible at or after 6 weeks of age [10]. Moreover, most of the participant technicians are aware of the number of vaccine doses, how it can be applied and the

side effects. This finding agrees with the conclusion that the RV1 should be administered orally in two doses, at the same time of DTP/penta1 and DTP/penta 2, with an interval of at least 4 weeks between doses [9,11,12].

In conclusion, training the staff on the immunization program will improve their skills, increase their awareness and reduce the percentage of defaulters in the locality.

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