

Rotavirus infection: symptoms and vaccination of rotavirus

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ABSTRACT

Rotavirus is a highly contagious viral infection that primarily affects infants and young children, causing severe diarrhea and vomiting. It is a major cause of gastroenteritis worldwide, responsible for an estimated 128,500 deaths annually in children under five years of age. The virus is transmitted through fecal-oral route, and outbreaks can occur in crowded environments such as daycares and hospitals.

There are several vaccines available to prevent rotavirus infection, including two oral vaccines that have been shown to be highly effective in reducing the incidence of severe rotavirus gastroenteritis. These vaccines have been introduced into national immunization programs in many countries, resulting in a significant decrease in rotavirus-associated hospitalizations and deaths.

Keywords: Rotavirus; Viral infection; Rotavirus infection; National immunization programs; Rotavirus-associated hospitalizations; Vaccines

INTRODUCTION

Rotavirus infection is a highly contagious viral illness that affects the gastrointestinal tract, causing severe diarrhea and vomiting. It is a common cause of gastroenteritis in young children worldwide, especially those under the age of five. Rotavirus infection is transmitted through contact with contaminated surfaces, food, or water, and can also be spread through person-to-person contact [1].

The disease can be especially dangerous for infants and young children, who may become severely dehydrated as a result of the diarrhea and vomiting. In severe cases, hospitalization may be necessary. There is a highly effective vaccine available to prevent rotavirus infection. The vaccine has been shown to be safe and effective in reducing the incidence of severe rotavirus disease and related hospitalizations [2]. The World Health Organization (WHO) recommends routine vaccination of infants with the rotavirus vaccine, and many countries have included it in their national immunization programs. In this article, we will explore the causes, symptoms, and treatment of rotavirus infection, as well as the benefits and potential risks of the rotavirus vaccine. We will also discuss the impact of the vaccine on global health, and the challenges that remain in ensuring widespread access to this life-saving intervention [3].

Rotavirus infection is a highly contagious viral illness that causes severe diarrhea and vomiting in infants and young children. It is one of the leading causes of gastroenteritis in children worldwide and is responsible for over 200,000 deaths annually [4]. Rotavirus is transmitted through the fecal-oral route, and the virus can survive for days on surfaces and in water, making it easy to spread.

The vaccines have been shown to be highly effective in reducing the incidence of severe rotavirus gastroenteritis in children. They are typically given to infants in a series of doses, starting at around 2 months of age. In this era of modern medicine, the availability of vaccines is critical in the prevention of infectious diseases [5]. The use of rotavirus vaccines has proven to be an effective strategy in reducing the incidence of severe gastroenteritis caused by rotavirus, thereby reducing the burden of disease on affected individuals, their families, and healthcare systems. This article will discuss the basics of rotavirus infection and the importance of vaccination in preventing this disease [6].

Causes of rotavirus infection

Rotavirus is transmitted through the fecal-oral route, which means that it is spread when the virus is present in the feces of an infected person or animal and is ingested by another person. It can be transmitted through contaminated food, water, or surfaces that have been touched by an infected

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person [7].

Symptoms of rotavirus infection

Symptoms of rotavirus infection usually appear one to three days after exposure to the virus and may include:

1. Fever
2. Vomiting
3. Diarrhea
4. Abdominal pain
5. Dehydration

The symptoms can be severe in young children and infants, as they can become dehydrated quickly. In some cases, hospitalization may be required to treat severe dehydration.

Other ways to prevent rotavirus infection include:

The best way to prevent rotavirus infection is through vaccination. The rotavirus vaccine is recommended for all infants and is usually given in two or three doses, depending on the vaccine used. The vaccine has been shown to be highly effective in preventing severe rotavirus disease and hospitalization [8]. Practicing good hygiene, such as washing hands regularly and thoroughly with soap and water, especially after changing diapers or using the bathroom. Avoiding close contact with people who have rotavirus or other contagious illnesses [9]. Keeping surfaces clean and disinfected, especially in areas where children play or eat.

Treatment of Rotavirus Infection: There is no specific treatment for rotavirus infection. The main goal of treatment is to prevent dehydration by replacing fluids lost through vomiting and diarrhea. In some cases, hospitalization may be required to treat severe dehydration. In these cases, fluids and electrolytes are given intravenously, and the child is monitored closely for signs of improvement.

Rotavirus is a common virus that causes diarrhoea in young children. The disease is highly contagious and can spread easily through contact with an infected person, contaminated food or water, or objects that have been contaminated with the virus [10]. Symptoms of rotavirus

infection include vomiting, fever, and watery diarrhoea that can last for up to a week. In severe cases, dehydration can occur, which can be life-threatening, especially in young children. Rotavirus is one of the leading causes of severe diarrhoea in children under the age of five worldwide, and it is responsible for over 200,000 deaths annually. The majority of these deaths occur in developing countries where access to healthcare is limited. The best way to prevent rotavirus infection is through vaccination. In many countries, rotavirus vaccination is now part of the routine childhood vaccination schedule. The vaccine

CONCLUSION

Rotavirus infection is a highly contagious viral infection that can cause severe gastroenteritis in infants and young children. The best way to prevent rotavirus infection is through vaccination. Other preventive measures include good hygiene and avoiding close contact with people who have rotavirus or other contagious illnesses. If your child develops symptoms of rotavirus infection, it is essential to seek medical attention promptly to prevent severe dehydration. This article provides an overview of rotavirus infection, including its epidemiology, clinical features, and pathophysiology. We also discuss the current state of rotavirus vaccination, including the available vaccines and their efficacy, safety, and implementation in different countries. Finally, we highlight the challenges and opportunities in the control of rotavirus disease, including the need for continued surveillance and research to improve vaccine efficacy and uptake.

Rotavirus is a highly contagious virus that can cause severe gastroenteritis, or inflammation of the stomach and intestines, in infants and young children. It is responsible for an estimated 215,000 deaths annually worldwide, mostly in developing countries where access to healthcare is limited. In this article, we will discuss the causes, symptoms, and prevention of rotavirus infection.

REFERENCES

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| <ol style="list-style-type: none"> 1. Stevenson TH, Castillo A, Lucia LM, et al. Growth of <i>Helicobacter pylori</i> in various liquid and plating media. <i>Lett Appl Microbiol.</i> 2000;30: 192-6. 2. Akpan A, Morgan R. Oral candidiasis. <i>Postgrad Med J.</i> 2002;78: 455-9. 3. Lippi D, Gotuzzo E. the greatest steps towards the discovery of <i>Vibrio cholerae</i>. <i>Clin Microbiol Infect.</i> 2014;20: 191-195. 4. Cassells AC. Pathogen and biological contamination management in plant tissue culture: phytopathogens, vitro pathogens, and vitro pests. <i>Plant Cell Culture Protocols. Methods mol Boil.</i> 2012;877: 57-80. 5. Belland R, Ouellette S, Gieffers J, et al. Chlamydia pneumoniae and atherosclerosis. <i>Cell Microbiol.</i> 2004;6: 117-27. | <ol style="list-style-type: none"> 6. Azoulay E, Russell L, Van de Louw A, et al. Diagnosis of severe respiratory infections in immunocompromised patients. <i>Intensive Care Medicine.</i> 2020;46: 298-314. 7. Jugder BE, Watnick PI. <i>Vibrio cholerae</i> Sheds Its Coat to Make Itself Comfortable in the Gut. <i>Cell Host & Microbe.</i> 2020;27: 161-163. 8. Begum N, Ahmed Q S U. Incidence of Anal Fistula and Recurrent Abscesses. Following Management of Perianal Abscess. <i>J Armed Forces Med Coll.</i> 2016;12: 26-29. 9. Ramanujam PS, Prasad ML, Abcarian H, et al. Perianal abscesses and fistulas: A study of 1023 patients. <i>Dis Colon Rectum.</i> 1984;27: 593. 10. Stephenson Larry W, Arbulu Agustin, Bassett Joseph S, et al. Forest Dewey Dodrill: heart surgery pioneer. <i>J Thorac Cardiovasc Surg.</i> 2002;17: 247-257. |
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