Original Article

Acute Gastroenteritis Outbreak in Meghalaya, India

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Abstract

Background: Between January and February 2018, an outbreak of acute gastroenteritis (AGE) was reported in Nongpoh Civil Hospital, Ri-Bhoi District in Meghalaya among the under five children. The mothers reported that the children developed diarrheal diseases after receiving polio drops administered during Intensified Pulse Polio Immunization (IPPI) first round (January 29–31, 2018). **Objective of the study:** To describe the outbreak and to prevent and control the outbreak. **Methods:** This survey was conducted among the under-five children on February 2, 2018 reported with increased AGE cases. Rapid Response Team from District Surveillance Unit, Ri-Bhoi generated an early warning signal and conducted an epidemiological investigation. Parents alleged that polio drops administered during IPPI first round caused illness. All the under-five children admitted and registered in in-patient were investigated. A total of 85 cases fit the case definition of AGE. **Results:** The median age of these cases was 1 year 2 months (1 month, 5 years) with 44 (51.7%) male and 41 (48.2%) female. All three stool samples (100%) tested positive for Rotavirus Ag. Similarly, all two water samples (100%) showed coliforms beyond permissible values. The present outbreak highlights that a high proportion of infants who were affected from Nongpoh, Umtasor, and Umkaduh. **Conclusion:** The identified causative agent is Rotavirus Ag. Polio vaccine was not associated with illness.

Key words: Acute Gastroenteritis, Outbreak Investigation, Polio Drops Immunization

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Introduction

Diarrheal disease is a leading cause of child mortality and morbidity in the world and mostly results from contaminated food and water sources. Diarrhea can last for several days and can leave the body without the water and salts that are necessary for survival; severe dehydration and fluid loss were the main causes of diarrhea deaths. Diarrheal disease is the second leading cause of death

in children under 5 years old.^[1] Diarrheal diseases are a major cause of hospitalizations and child deaths globally. Together they account for approximately one in six deaths among children younger than 5 years.^[2] In India, diarrhea remains the second leading cause of death in children under 5 years, killing an estimated 321 children every day in 2015.^[3] *Rotavirus* is the leading cause of severe diarrhea in children in developed and developing countries.^[4]

On February 2, 2018, The Medical Superintendent, Nongpoh Civil Hospital reported that there is increased acute gastroenteritis acute gastroenteritis (AGE) cases (diarrhea, vomiting, fever, and abdominal pain) among under-five children. Parents alleged that polio drops administered during Intensified Pulse Polio Immunization (IPPI) first round (January 29–31, 2018) caused illness.

Materials and Methods

This survey was conducted in Nongpoh Civil Hospital between January 28 and February 26, 2018. All the

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