

Challenge in Environmental Health: A Cholera Case Report from Rural Assam

Kayanat Rizbe¹, Jenita Baruah², Tulika Goswami Mahanta³

¹Junior Resident, ²Associate Professor, ³Professor & Head, Department of Community Medicine, Assam Medical College & Hospital.

Email Id: rizkaya20naaz@gmail.com

Abstract

Introduction: Cholera is an acute diarrhoeal infection caused by consumption of contaminated food or water with the bacterium *Vibrio cholerae* and is an extremely virulent disease. Cholera is transmitted via feco-oral routes. Cholera remains a global threat to public health as it causes frequent outbreaks globally and serves as an indicator of inequity and lack of social development. Inadequate access to clean water, sanitation and hygiene services plays an important role in transmission of cholera. The current study aims to investigate a case of Acute Diarrhoeal Disease in Dibrugarh district of Assam.

Materials and Methods: Rapid outbreak investigation of the acute diarrhoeal disease was carried out following hospitalization of the case in a tertiary care hospital of Dibrugarh, Assam to confirm the outbreak and delineate measures to control it.

Results: The patient aged 5 months and 20 days resident of Dibrugarh was presented to Paediatrics department of a tertiary care hospital on June 4, 2023 with symptoms of fever, cough, acute watery diarrhoea, vomiting with signs of dehydration. Microbiological investigation showed stool sample positive for *Vibrio cholerae* serotype Ogawa. Water sample analysis report (Most Probable Number Test) interpreted as Class 4 that is unsatisfactory for drinking purpose. On field investigation no similar cases reported neither from the family nor the community. Water sanitation and hygiene practices in the family were found to be sub-optimal.

Conclusion: This case report demonstrated *Vibrio cholerae* infection in a 5 months 20 days old infant with symptoms of profuse watery diarrhoea, fever and vomiting leading to some dehydration. There is a need to improve the water, sanitation and hygiene practices in the community.