

Cholera and Detailed Summary About Vibrio Cholera(Pathogen) and Bacteriophage Prokaryote Dynamic

Zindog Mukandavire*

Department of United States Centers for Disease for Control and Prevention, kampala Uganda

*Corresponding author: Mukandavire Z, Department of United States Centers for Disease for Control and Prevention, kampala Uganda, Tel: 2564376324, Email: Zingdog.mukandavire@conventry.ac.uk

Received date: August 02, 2021; Accepted date: October 14, 2021; Published date: October 14, 2021

Citation: Mukandavire Z (2021) Cholera and Detailed Summary About Vibrio Cholera(Pathogen) and Bacteriophage Prokaryote Dynamic, J Infec Dis Treat, Vol: 7 No: 8.

Abstract

Cholera is an excruciating secretory diarrhea illness which is caused by the bacteria called a *Vibrio cholerae*. It effected more than four million people per year throughout the entire world. It mainly effects the loss of High fluids along with the electrolyte disturbances that leads to the hemorrhagic shock and ultimately causes death. The disease is transmitted by the means of oral route by drinking contaminated water and food with bacteria within. So the key factor is to replace the fluids and electrolytes lost as soon as possible to decrease its extreme condition

Introduction

Cholera is caused by various types of *Vibrio Cholerae*, types that includes produces dangerous disease compared to other. Cholera bacteria is also found shellfish and plankton. Its is transmitted through drinking contaminated water or food which contain the bacteria that causes the cholera and in additionally undercooked seafood is also one of the common source. This disease affect only the human body. The Risk factors for the cholera disease include poor hygiene, safe and clean drinking water, and poor sanitation. Cholera can be diagnosed by a test called stool test A dipstick test is also available but is not as precise as stool test

Prevention methods

The method includes against cholera is developed sanitation and providing good and safe clean water. For the permanent solution for the prevention of the the cholera disease is Cholera vaccine that are given by mouth provide protection for about six months. They have the added benefit of protecting against another type of diarrhea caused by *Escherichia coli*. The primary treatment oral rehydration therapy and the replacement of fluids with sweet and salty solutions. Rice-based supplements are preferred and Zinc supplements are useful to children. In critical cases, IV fluid which mean the liquids given to replace water, sugar and salt and also by Ringer lactate is mixture of sodium chloride, sodium lactate, potassium chloride, and

calcium chloride in water and antibiotics are more beneficial. Testing to see which antibiotic the cholera is susceptible to help and guide the path to choice.

Symptoms

The primary symptoms of cholera is diarrhea and vomiting of clear fluid.

These symptoms starts after half a day to five days after dehydration caused by the bacteria.

Fever is very rare so suspicion for secondary infection must be concerned.

Patients body shows some effects like sunken eyes, dry mouth, cold clammy skin, or wrinkled hands

Blood pressure drops due to dehydration, peripheral pulse decrease, and urine output decreases with time.

Bacteriophage prokaryote dynamics

Bacteriophages are most common and important entities in the biosphere. Bacteriophages are pervasive viruses, found wherever. Viruses are the most plentiful biological entity in the water column in world of oceans and second largest biomass of prokaryotes. Bacteriophage and interaction are believed to be important in managing microbiome composition and ecosystem functions, but our less knowledge of the spatial and temporal variation in phage and prokaryotic community compositions prohibit accurate assessment of their roles and there impacts. Anaerobic digesters are perfect model systems to examine phage host interaction, which is easy access, stable operation, nutrient-rich environment, and enormous numbers of phages and prokaryotic cells.

Conclusion

Cholera can be prevented and controlled more effectively at basic environment level. This also requires a multi-disciplinary approach including poverty mollification.

Reference

1. Krupovic M, Prangishvili D, Hendrix RW, Bamford DH. Genomics of bacterial and archaeal viruses: dynamics within the prokaryotic virosphere. *Microbiology and Molecular Biology Reviews*. 2011;75(4):610-35.
2. Fogel MA, Waldor MK. Distinct segregation dynamics of the two *Vibrio cholerae* chromosomes. *Molecular microbiology*. 2005;55(1):125-36.
3. Wei Y. Population dynamics of *Vibrio cholerae* and its bacteriophage (Doctoral dissertation, Emory University).
4. Seed KD, Lazinski DW, Calderwood SB, Camilli A. A bacteriophage encodes its own CRISPR/Cas adaptive response to evade host innate immunity. *Nature*. 2013;494(7438):489-91.
5. Thompson JR, Polz MF. Dynamics of *Vibrio* populations and their role in environmental nutrient cycling. *The biology of vibrios*. 2006 :190-203.
6. Pruzzo C, Vezzulli L, Colwell RR. Global impact of *Vibrio cholerae* interactions with chitin. *Environmental microbiology*. 2008;10(6):1400-10.
7. Flores CO, Meyer JR, Valverde S, Farr L, Weitz JS. Statistical structure of host–phage interactions. *Proceedings of the National Academy of Sciences*. 2011;108(28):E288-97.
8. Vezzulli L, Brettar I, Pezzati E, Reid PC, Colwell RR, Höfle MG, Pruzzo C. Long-term effects of ocean warming on the prokaryotic community: evidence from the vibrios. *The ISME journal*. 2012;6(1):21-30.
9. Minot S, Sinha R, Chen J, Li H, Keilbaugh SA, Wu GD, Lewis JD, Bushman FD. The human gut virome: inter-individual variation and dynamic response to diet. *Genome research*. 2011;21(10):1616-25.
10. Dorman MJ, Domman D, Poklepovich T, Tolley C, Zolezzi G, Kane L, Viñas MR, Panagópulo M, Moroni M, Binsztein N, Caffer MI. Genomics of the Argentinian cholera epidemic elucidate the contrasting dynamics of epidemic and endemic *Vibrio cholerae*. *Nature communications*. 2020;11(1):1-2.