Staying Informed About Cholera

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Abstract

Cholera is an acute diarrheal illness caused by infection of the intestine with Vibrio cholerae bacteria (Centers for Disease Control, 2023). The Center for Disease Control goes on to explain that if left untreated it has an extremely high mortality rate of 50%. If treated, however, this rate drops down to 1%. Even with practical treatment, there are 21,000 to 143,000 deaths worldwide every year (World Health Organization, 2023). Cholera is mainly spread through unclean drinking water (World Health Organization, 2023). In the following text, the etiology, symptoms, transmission process, history, treatment options, prognosis, and prevention methods of Cholera will be transcribed. Through this paper, information shall be disseminated for the prevention and positive treatment of Cholera.

Staying Informed About Cholera

Cholera (discovered in 1854) “is an acute diarrheal disease that can kill within hours if left untreated,” (World Health Organization, 2023). After eating food or water contaminated with Vibrio cholerae bacterium, the victim of Cholera can be unaware for 12 hours and 5 days. Symptoms begin to show after this period (Center for Disease Control, 2023). The main symptom is severe acute watery diarrhea. The Center for Disease Control goes on to say that diarrhea causes severe dehydration whose visible symptoms include shrunken eyes and wrinkled skin. Cholera can affect anyone and everyone killing both children and adults without bias (World Health Organization, 2023). The most important fact about this disease is that it is easily preventable and curable. In this paper, you will be informed about the symptoms and preventative measures for Cholera.

History

The first Cholera pandemic sprouted up around the 19th century and spread exponentially, the following outbreaks would kill millions (World Health Organization, 2023). Scientists originally believed that it was a “miasmatic disease” which meant that it coincided with bad air which professionals thought was the cause. (Harvard, 2023). “Bad air” was considered the explanation for many diseases such as tuberculosis, malaria, and cholera (Portland State University, 2023). Sterner also goes on to explain that the bad air was considered to be caused by simply rotting organic material. Scientists later learned that it was actually contracted from predominantly contaminated food substances (World Health Organization, 2023).

Etiology

Cholera is an infection that is caused by the bacteria Vibrio Cholerae (Mayo Foundation for Medical Education and Research, 2023). Vibrio Cholerae affects the intestines. (Centers for

Disease Control, 2023). This disease is transported by food that is consumed by the victim (Center for Disease Control, 2023). One main way that Cholera is transported is by surface or well water. Other ways that Cholera is transported are through seafood, grains, and raw fruits and vegetables (Foundation for Medical Education and Research). Ultimately, through contaminated food, people

Signs and Symptoms

The signs and symptoms of Cholera are manifold. The symptoms range over many areas of the body but all have one common denominator, they are related to dehydration (Foundation for Medical Education and Research, 2023). These symptoms include intense thirst, leg cramping, restlessness, irritability, diarrhea, and vomiting (Center for Disease Control 2023). These symptoms cause the body to lose moisture rapidly, often resulting in fatalities (World Health Organization, 2023). Signs that health professionals can identify are luckily also manifold. These signs include rapid heart rate, lack of skin elasticity, dry mucous membranes, low blood pressure, muscle cramps, and shock (World Health Organization, 2023 and Center for Disease Control, 2023). All these physical changes can be used to correctly identify and aid a victim of Cholera.

Transmission

Cholera transmission is closely related to inadequate access to clean water and sanitation facilities. (Centers for Disease Control, 2023). Centers for Disease Control go on to explain that in areas where cholera is endemic, outbreaks can be either seasonal or sporadic, corresponding with a higher number of cases than expected. In regions where cholera is not common, an outbreak is seen as at least one confirmed case of cholera with evidence of local transmission in an area where cholera is not typically found. The primary mode of cholera transmission is through contaminated food and water. Contaminated surface or well water is a common source of infection, particularly in areas with inadequate sanitation. Seafood, grains, and raw fruits and

vegetables can also carry the cholera bacterium when they come into contact with contaminated water sources (World Health Organization, 2023). Cholera is not known to be transmitted through the consumption of infected dead bodies which it was believed and known as the miasmatic theory (Sterner, 2023). Cholera transmission can be made worse during humanitarian crises, where poor access to water and sanitation systems, as well as overcrowded and unsanitary living conditions, increase the risk of the disease spreading.

The transmission process as it refers to the chain of infection is the following. The transmission of Cholera starts with Vibrio cholerae which is the infectious agent (World Health Organization, 2023). Infected victims are the reservoirs, and the portal is the bacteria leaving through their feces (Centers for Disease Control, 2023). The main mode of transmission is through contaminated water and food (Mayo Foundation for Medical Education and Research, 2023). To interrupt this chain, emphasis should be placed on sanitation, vaccination, education, and prompt treatment, all essential in public health efforts to prevent and control cholera outbreaks (World Health Organization, 2023).

Treatment

Cholera, while potentially life-threatening, is highly treatable with prompt and appropriate interventions (World Health Organization, 2023). The World Health Organization goes on to explain that the key to successful treatment is the rapid rehydration of the patient to replace the fluids and electrolytes lost through diarrhea and vomiting. Oral rehydration solutions also known as ORS are a critical part of treatment and are widely available (World Health Organization, 2023). The World Health Organization goes on to explain that they help replace the lost fluids and electrolytes and can be administered even in resource-limited settings. In severe cases, especially when dehydration is severe, intravenous (IV) fluids may be required to ensure a faster and more effective rehydration process (Center for Disease Control, 2023). Healthcare professionals may also prescribe antibiotics to reduce the duration and severity of

symptoms (Mayo Foundation for Medical Education and Research, 2023). In cases where cholera is suspected or confirmed, it is essential to seek immediate medical attention (Centers for Disease Control 2023).

Prognosis

The prognosis for cholera is generally favorable if the appropriate treatment is provided promptly (World Health Organization, 2023). With more mainstream access to rehydration therapy and, if necessary, antibiotics, the mortality rate can be reduced to as low as 1%, as mentioned earlier (World Health Organization, 2023). However, in the absence of proper treatment, cholera can lead to severe dehydration, shock, and even death within a matter of hours (Centers for Disease Control, 2023). The long-term complications of Cholera are few and far between because of the fatality rate of the disease. These complications include Hypoglycemia, Kidney Failure, and Low Potassium levels (Mayo Foundation for Medical Education and Research, 2023). Timely intervention is critical to ensure the safety of patients (Centers for Disease Control, 2023).

Prevention

The prevention of Cholera is key, given its potentially devastating consequences. (World Health Organization, 2023). The key to Cholera prevention lies in safeguarding access to clean water and proper sanitation facilities (Centers for Disease Control, 2023). In areas where Cholera is endemic, it is crucial to stay alert and implement preventative measures, such as systematic testing and purification of consumable resources (Mayo Foundation for Medical Education and Research, 2023). Public health campaigns that educate communities on safe water practices, including proper hygiene and sanitation, can significantly reduce the risk of Cholera transmission (World Health Organization, 2023).

Vaccination is another effective tool in Cholera prevention (Mayo Foundation for Medical Education and Research, 2023). Oral cholera vaccines can be administered to possible susceptible hosts living in active Cholera sites. (World Health Organization, 2023). Finally, health officials should remain alert toward the possibility of outbreaks by implementing containment measures, and ensuring that safe water and food are readily available (Centers for Disease Control, 2023).

Conclusion

Cholera, though a fatal disease, is preventable and treatable when the right steps are taken (World Health Organization, 2023). The World Health Organization goes on to explain that access to clean water and proper sanitation are crucial in preventing Cholera transmission. The availability of oral rehydration solutions and antibiotics, along with quick medical attention, improves the prospect of recovery for victims (Mayo Foundation for Medical Education and Research, 2023). Finally, education on Cholera, its causes, and preventative measures that can be taken against it is important to keep Cholera rates down (World Health Organization, 2023). Through public health initiatives and vaccination, we can further reduce the impact of Cholera worldwide (Centers for Disease Control, 2023).

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