

An escherichia coli
o157:h7 outbreak
among teenage
campers



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An Escherichia coli O157: H7 Outbreak among Teenage Campers Question

The procedure involved in identifying the pathogen includes the history of individual campers. This happens through interviewing the campers and finding out the possibility of either of them suffering from the disease before arriving at the camp. The next way of identifying the pathogen is by checking and testing the feed in the camp and establishing their status of infection. Checking the hygienic condition of the environment to establish any source of infection is also another possible way of tracking the root of infection.

Question 2

Most of the E. coli strains are beneficial in the gut because it is gram-negative bacteria. Strains of E. coli are capable of producing vitamin K2 and K3. Gram-negative cells are protective in nature and prevent entry toxins. This factor helps in preventing entry of other microorganisms. The protective nature of gram-negative bacteria also makes them resistant to infections due to the nature of their cell membrane. Nonpathogenic strains of E. coli can also be easily studied due to their ability to survive outside the body. The bacteria also grow easily which provide a good platform for studies.

Question 3

The bacteria are capable of translocating to organs such as the kidney and the brain. Infections of E. coli O157: H7 kill the cells in the kidney. The bacteria also kill cells in the intestine leading to bleeding and swelling. The bacteria damaging the cells in the kidney cause HUS. The toxins can also cause damage to endothelial cells in the brain causing blood brain barrier.

Question 4

The probable cause of transmission from the scenario is drinking water or ice
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contaminated by human or animal feces. Another way the disease could be transmitted is through consumption of undercooked ground meat and raw milk. Cross contamination while handling the food products is also possible especially utensils. In this case, the can carrying the ice cubes was infected through cross contamination. Person to person contamination is also possible. This is through hands and contact.

Question 5

Giving water regularly to sick individuals ensure that they do not end up dehydrated since they lose lots of water through diarrhea. In severe cases, blood transfusion is necessary due to cases of bloody diarrhea. It advisable that while undergoing this infection patients are not given any antibiotics or diarrhea medicine since these drugs can slow down the process of diarrhea while allowing the toxins to penetrate more in the body.

Question 6

The campers are advised to deposit their waste in the right manner to avoid possibilities of outbreaks. The campers are to prepare their food in the right manner by ensuring that meat products are well cooked. In addition to this, the campers should ensure that they drink pasteurized milk and eat vegetables that have not been infected by sewage. Another way through which contamination is through drinking contaminated water. The campers are advised to drink boiled water and avoid any means of contamination (1-1969)). Person to person contamination is possible therefore, campers are advised to wash their hands properly after visiting the toilets and before handling food. Use of clean equipment's and utensils is also necessary for the campers.

Work Cited

(1-1969), . Codex Recommended International Code of Practice-General Principles of Food Hygiene (CAC/RCP. FAO and WHO. Food Hygiene Basic Texts. Fourth edition. New York: FAO, WHO, 2009.