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Q: What is Polio? [causes, symptoms, treatment, Preventive measures]

a) What is Polio? Polio, or Poliomyelitis, is a highly contagious viral infection which is caused by poliovirus. The virus primarily affects the nervous system and can lead to paralysis, most commonly in legs. There are three types of Polio virus, and infection with any of them can result in a range of outcomes. Most people contracting the virus, however, do not develop any symptoms and may not even be aware that they are infected. For those who do show symptoms, they can range from mild flu-like symptoms to more severe outcomes, including paralysis.

b) Symptoms of Polio: Polio, caused by poliovirus, can manifest with a range of symptoms. While many infected individuals remain asymptomatic, others may experience flu-like signs. Initial symptoms often include fever, headache, sore throat,

and general malaise. In most of the cases, the virus progresses to attack the nervous system leading to more severe outcomes. As the infection advances, muscles weaken and paralysis occurs, with the legs being the most commonly affected. In some cases, the paralysis can be permanent.

The severity of symptoms varies widely, and the factors such as age and overall health can also influence the impact of the virus.

c) Causes of Polio: The poliovirus is the cause of polio, and it is primarily transmitted by being in contact with the faces of an infected person. The virus also enters the body through contaminated food or water. Following are some main causes and factors associated with transmission of the polio virus.

i- Person to person transmission: The virus is present in the throat and intestine of infected individuals, which can shed in their faces. Direct contact with an infected person's face can lead to transmission.

ii- Contaminated water: Poliovirus can survive in water for an extended period. In areas with poor sanitation and inadequate hygiene.

practices, the virus can contaminate drinking water sources. Consuming the contaminated water is a common mode of transmission.

iii- Contaminated food: The virus can also be transmitted through the consumption of food that has been contaminated with the feces of an infected person. This can occur if food is prepared or handled by individuals with the virus who have poor hygiene.

iv- Close living conditions: Poliovirus spreads more easily in areas with crowded living conditions, as close contact facilitates the transmission of the virus from person to person.

v- Lack of Vaccination: Before the widespread use of polio vaccine, the virus caused significant outbreaks and epidemics. Vaccination is a critical factor in preventing the spread of the virus and protecting individual from infection.

d) Treatments of Polio: There is no cure for polio, and once an individual is infected, the focus shifts to supportive care and managing symptoms. Treatment primarily involves

alleviating pain and discomfort, ensuring proper hydration and physical therapy. In more severe cases where respiratory function is compromised due to muscle paralysis, mechanical ventilation may be necessary.

Prevention, however, is the key strategy in combating polio. Vaccination, particularly through Oral polio vaccine (OPV) is highly effective in preventing polio infection, and has been instrumental in global efforts to eradicate the disease.

e) Preventive Measures of Polio: The most effective preventive measure against polio is vaccination. There are two primary types of vaccines used for polio.

i- Inactivated Polio Vaccine: IPV is an injectable vaccine that contains killed polio virus. It is transferred through a series of doses to provide immunity against all three types of polio virus.

ii- Oral polio vaccine: OPV is an oral vaccine that contains weakened live polio virus. It is transferred into human body as drops in the mouth.