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Yellow Fever

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Yellow fever is an acute viral hemorrhagic mosquito-borne disease. The prevalence of yellow fever is higher in tropical South American and Sub-Saharan Africa. Yellow fever can be catastrophic as it causes high fever and the death of different cells of kidney and livers.

**Etiology of Infectious disease**

Aedes aegypti mosquito is responsible to increase the prevalence of yellow fever in a population. These mosquitoes transmit flavivirus when it bites a human or monkey. Flavivirus is a single-stranded RNA virus. It is notable to mention that these mosquitos transmit the virus back and forth in humans and monkey. It is evident that these mosquitos breed in humid and semi-humid environments. The virus enters the bloodstream of these mosquitos when they bite an infected person or monkey. Transmission of this virus is possible when these infected mosquitos bite another human.

**Mode of Transmission**

There are three possible transmission cycles for yellow fever. These transmission cycles include sylvatic, Savannah, and urban. In the sylvatic cycle, the transmission of the virus takes place between mosquitoes and monkeys in the forest setting (Monath 164). This virus is transferred from monkeys to human beings when they visit the jungle. In the savannah cycle, the transmission of virus takes place from human to human or from monkey to human in the jungle border areas. The last mode of transmission is the urban cycle in which mosquitoes transfer the virus from humans to humans.

**Pathogenesis of disease**

The flavivirus is introduced in the dermis in saliva with the help of infected mosquitoes. It is notable to mention that a dose of 3-4 log10 is required in a mosquito to infect a human or monkey. If that required dose is fulfilled, then the virus goes to the draining lymph nodes through lymphatic channels. An extracellular virus is released in the bloodstream of humans through lymph nodes (Gardner, Christina, and Ryman 241). A secondary viremia is caused due to the release of the virus which infects the tissues in the kidney and heart. Extrinsic resistance is caused by Kupffer cells, which hinder the growth of flavivirus in the human body.

**Clinical Picture of Disease**

It is notable to mention that no specific signs or symptoms appear during the first three to five days of the transmission of infection. The symptoms of yellow fever appeared in two phases, including acute and toxic phase. In the acute phase, a person usually experiences fever, headache, loss of appetite, vomiting, nausea, sensitivity to light, muscles aches, and red eyes or tongue, and dizziness. Critical symptoms began to appear when it enters in the toxic phase. These symptoms include yellowing of the skin, slow heart rate, decreased urination, abdominal pain, brain dysfunction, bleeding from the nose, and liver and kidney failure.

**Diagnosis, Treatment, Prognosis of the Disease, and Prevention of Disease**

Diagnosis of yellow fever is possible with the help of testing serum for the detection of virus-specific IgM. Furthermore, it can also be diagnosed through histopathology with immunohistochemistry, nucleic acid amplification, and autopsy of tissues. Best possible way of preventing yellow fever is through vaccination. It is notable to mention that there are numbers of vaccination strategies to prevent the prevalence of yellow fever such as mass vaccination campaigns, routine infant immunization, and vaccination of travelers. Vaccination for yellow fever is much effective as it can provide protection for more than 10 years (Frierson 77). Mosquito repellent is also effective to maintain appropriate safety from mosquitos. These repellents include skin repellent and non-skin repellent. Skin repellent such as picaridin, IR3535, or DEET are highly effective to safeguard a person from infected mosquitoes.

Works Cited

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