

Yellow Fever: A Potential Threat to Global Human Health Security

Devender Choudhary¹, Deepika Goklaney¹, Raghavendra Prasad Mishra², Prachi Gautam³ and Manoj Netra⁴

¹Department of Veterinary Public Health & Epidemiology, College of Veterinary and Animal sciences, (RAJUVAS), Bikaner, Rajasthan, India

²Department of Veterinary Public Health & Epidemiology; M.B. Veterinary College, (RAJUVAS), Dungarpur, Rajasthan, India

³Department of Zoology; Dayalbagh Educational Institute (DEI), Agra, Uttar-Pradesh, India ⁴Department of Animal Genetics & Breeding; College of Veterinary and Animal Sciences, (RAJUVAS), Bikaner, Rajasthan, India.

ARTICLE ID: 100

Yellow fever is an acute viral hemorrhagic disease that is endemic in tropical areas of Africa and Latin America. Cases can be difficult to distinguish from other viral hemorrhagic fevers such as arenavirus, hantavirus or dengue. Yellow fever is an epidemic-prone mosquito-borne disease that is transmitted to humans by the bites of infected by the bites of Infected Aedes and Haemagogus mosquitoes. These day-biting mosquitoes breed around houses (domestic), in forests or jungles (sylvatic), or in both habitats (semi-domestic). When infected individuals spread the virus into densely populated areas with lots of mosquitoes and when the majority of people lack immunity through lack of immunization, large outbreaks of yellow fever can develop. In these circumstances, Aedes aegypti mosquitoes that are infected spread the virus from person to person.

Symptoms

Yellow fever has incubation periods 3 to 6 days. Numerous people don't have symptoms. Fever, aches in the muscles, headaches, appetite loss, nausea, and vomiting are typical symptoms. The majority of the time, symptoms go away after 3 to 4 days. A small percentage of patients enter a second, more toxic phase within 24 hours of recovering from initial symptoms. In a second stage it shows high fever and several body systems are affected, usually the liver and the kidneys. People are more likely to experience abdominal pain with vomiting, dark urine, and jaundice. The lips, nose, eyes, or stomach can all bleed. When a patient enters the toxic phase, 50% of them pass away within 8–10 days.

Treatment-

Yellow fever does not have a specific antiviral medication. Patients should relax, drink plenty of water, and consult a doctor. Treatment for fever, liver and renal failure, and dehydration enhance results. Antibiotics can be used to treat bacterial infections that are related.

Diagnosis-Yellow fever is challenging to diagnose, especially in the beginning. Malaria, leptospirosis, viral hepatitis, various hemorrhagic fevers, infection with other flaviviruses (including dengue), and poisoning can all be mistaken for a more severe disease. Blood tests using the polymerase chain reaction (PCR) can occasionally find the virus in the early stages of an illness. Later stages require antibody identification testing by ELISA.

Prevention and control

- 1. Vaccination-** Vaccination is the most important means of preventing yellow fever. The yellow fever vaccine is safe, affordable and a single dose provides life-long protection against yellow fever disease. The vaccine provides effective immunity within 10 days for 80–100% of people vaccinated, and within 30 days for more than 99% of people vaccinated.
- 2. Vector control-** The risk of yellow fever transmission in urban areas can be reduced by eliminating potential mosquito breeding sites, by applying larvicides to water storage containers and other places where standing water collects.
- 3. Epidemic preparedness and response-** Prompt detection of yellow fever and rapid response through emergency vaccination campaigns are essential for controlling outbreaks.