



A brief note on dengue virus

Sam Santiago*

Department of Pathobiological Sciences, University of Malaya,
Queensland, Australia.

DESCRIPTION

Dengue virus is that the explanation for dengue. It is a mosquito-borne, single positive-stranded RNA virus of the family Flaviviridae; genus Flavivirus. Five serotypes of the virus are found, all of which can cause the entire spectrum of disease. Nevertheless, scientists' understanding of dengue virus could also be simplistic, as instead of distinct antigenic groups, a continuum appears to exist. This same study identified 47 strains of dengue virus. Additionally, coinfection is with and lack of rapid tests for zika virus and chikungunya complicate matters in real-world infections. Dengue virus has increased dramatically within the last 20 years, becoming one of the worst mosquito-borne human pathogens with which tropical countries got to deal. Current estimates indicate that as many as 390 million infections occur annually, and much of dengue infections are increasingly understood to be asymptomatic or subclinical. Dengue and dengue haemorrhagic fever are important arthropod-borne viral diseases. Each year, there are ~50 million dengue infections and ~500,000 individuals are hospitalized with dengue haemorrhagic fever, mainly in Southeast Asia, the Pacific and thus America. Illness is produced by any of the four dengue virus serotypes.

A worldwide strategy aimed toward increasing the capacity for surveillance and outbreak response, changing behaviours and reducing the disease burden using integrated vector management in conjunction with early and accurate diagnosis has been advocated. Antiviral drugs and vaccines that are currently under development could also make an important contribution to dengue control within the longer term. Dengue is that the foremost vital arthropod-borne viral infection of humans. Worldwide, an estimated 2.5 billion people are in peril of infection, approximately 975 million of whom sleep in urban areas in tropical and sub-tropical countries in Southeast Asia, the Pacific and therefore the Americas. Transmission also occurs in Africa and thus the Eastern Mediterranean, and rural communities are increasingly being affected. It is estimated that quite 50 million infections occur annually, including 500,000 hospitalizations for dengue haemorrhagic fever, mainly among children, with the case death rate exceeding 5% in some areas. Common names for dengue include break bone fever, vomiting and dandy fever; dengue haemorrhagic fever and dengue shock syndrome are the severe forms. Dengue is found in tropical and subtropical climates worldwide, mostly in urban and semi urban areas. People of all ages who are

exposed to infected mosquitoes are possible victims of dengue. The disease occurs most frequently during the season in tropical countries in Southeast Asia, South Asia and South America, with high numbers of infected mosquitoes. The virus is transmitted to humans through the bites of infected female mosquitoes, though humans aren't capable of transmitting the disease and are not contagious. The period of time is 3 to 14 days, while the quantity of the illness is 3-7 days. Signs and symptoms may include severe headache; retro-orbital pain; muscle, joint, and bone pain; macular or maculopapular rash; and minor haemorrhagic manifestations, including petechial, ecchymosis, purpura, epistaxis, bleeding gums, haematuria, or a positive tourniquet test result. There aren't any approved direct antiviral treatments for dengue. Most antiviral research for dengue infections has focussed on inhibition of the NS2B/NS3 protease or NS5 proteins

Some people suffer from more severe sorts of dengue, like dengue haemorrhagic fever. Different strains of viruses interacting with people with different immune backgrounds cause a posh interaction. Among the possible causes is cross-serotype immune reaction, through a mechanism referred to as antibody-dependent enhancement, which happens when an individual who has been previously infected with dengue gets infected for the second, third, or fourth time. The previous antibodies to the old strain of dengue virus now interfere with the immune response to this strain, leading paradoxically to more virus entry and uptake. The global strategy for dengue prevention and control includes

- Vector control, supported the principles of integrated vector management
- Active disease surveillance supported a comprehensive health data system
- Emergency preparedness
- Capacity building and training
- Vector control research