

Dangerous Dengue fever – needs immediate attention of public about spreading and preventive measures

Dr S Jothi Arunachalam, MS, D.L.O*

*Department of General Surgery, Sri Ramakrishna Dental College, Coimbatore, Tamilnadu, India.

Dengue is a serious viral disease transmitted by the mosquito bite of, *Aedes aegypti*. Dengue fever is an infection caused by dengue viruses, of which there are four different serotypes known to infect humans. Serotype refers to groups of microorganisms that are extremely closely related, but can be distinguished by having slightly different antigens (a foreign substance which causes the body to produce antibodies) or causing the body to produce slightly different antibodies.

Dengue occurs in two forms:

Dengue fever and dengue haemorrhagic fever.

- Dengue fever is a severe, flu-like illness that affects older children and adults but rarely causes death.

- Dengue hemorrhagic fever (DHF) is a second more severe form, in which bleeding and occasionally shock occur, leading to death; it is most serious in children.

- Persons suspected of having dengue fever or DHF must see a doctor at once.

- Dengue haemorrhagic fever is a deadly disease and early diagnosis and treatment can save lives. Unless proper treatment is given promptly, the patient may go into shock and die.

The disease has a sudden onset and symptoms may include:

- fever for 3 to 7 days
- Intense headache and pain behind the eyes
- Muscle and joint pain
- Loss of appetite
- Vomiting and diarrhoea
- Skin rash

- Bleeding, usually from the nose or gums.

The symptoms of dengue fever vary according to the age and general health of the patient. Infants and young children may have a fever with a measles-like rash, which is difficult to distinguish from influenza, measles, malaria, infectious hepatitis and other diseases with fever.

Repeated episodes of dengue fever may result in excessive bleeding and shock but, with appropriate treatment, are rarely fatal.

Characteristics of Dengue Hemorrhagic fever & Shock

- Symptoms similar to dengue fever
- Severe and continuous stomach pains
- Pale, cold or clammy skin
- Bleeding from the nose, mouth and gums and skin bruising
- Frequent vomiting with or without blood
- Sleepiness and restlessness
- Constant crying
- Excessive thirst (dry mouth)
- Rapid weak pulse
- Difficulty in breathing
- Fainting

Dengue mosquitoes bite in the early morning and the late afternoon. Children, tourists and travellers are usually at a higher risk for Dengue transmission. However, adults living in endemic areas are in danger too.

The mosquito rests indoors, in closets and other dark places. Outside, they rest where it is cool and shaded. The female mosquito lays her eggs in water containers in and around homes, schools and other areas in towns or villages. The larvae, known as wigglers, hatch from the

mosquitoe eggs, and live in the water for about a week; they then change into a round pupal stage for one or two days, after which the adult mosquito emerges, ready to bite.

Diagnosis

Diagnosis of dengue fever is made by clinical presentation and a blood test.

Incubation period

3 to 14 days, commonly 4 to 7 days.

Infectious period

A mosquito becomes infected if it bites an infected person while the fever is present (an average period of about 3 to 5 days). After biting an infected person it takes 8 to 12 days before the mosquito can infect other people. The mosquito remains infectious for life.

Dengue fever is not directly spread from person-to-person.

Spreading of Dengue

There is no way to tell if a mosquito is carrying the dengue virus, therefore people must protect themselves from all mosquito bites, which will also protect against malaria and other mosquito-borne diseases.

Treatment

There is no specific treatment available as such.

General recommendations include controlling fever and pain with paracetamol rather than aspirin (aspirin may promote bleeding), and increasing fluid intake. Aspirin should not be given to children under 12 years of age unless specifically recommended by a doctor.

Prevention

As there is no drug to cure dengue or vaccine to prevent it, there are two key measures that can be applied to prevent the spread of Dengue.

Elimination of mosquito breeding places
- *Cover water containers* - Tight covers on water storage containers, will prevent the mosquitoes laying their eggs there. If the cover is loose, mosquitoes can go in and out.
- Cover and seal Septic tanks and soak-away pits, so that dengue mosquitoes cannot breed there.

- *Removal of waste* - Garbage articles and other unwanted waste found around houses can collect rainwater. They should be removed or smashed and buried in the ground or burned, where this is permissible.

- *Biological control* - Mosquito wigglers can be controlled by small larva eating fish, such as guppies. These fish can be found in streams or ponds or obtained through pet shops. Bacterial pesticides will also kill mosquito wigglers.

- *Chemical control* - Safe and easily used larvicides such as temephos sand core granules can be placed in water containers to kill developing wigglers.

Prevent Mosquito bites

People can protect themselves from mosquito bites by using any of the following means
- *Mosquito coils and electric vapour mats* - Slow burning mosquito coils or electric vapour mats are effective in the rainy season, just after sunrise and/or in the afternoon hours before sunset, when dengue mosquitoes bite.

- *Mosquito nets* - Nets placed over sleeping places can protect small children and others who may rest during the day. The effectiveness of such nets can be improved by treating them with permethrin (a pyrethroid insecticide). Curtains (cloth or bamboo) can also be treated with insecticide and hung at windows or doorways, to repel or kill mosquitoes.

*Author of this article is retired joint director at District level from Tamilnadu Government Health Services, Ooty.