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Department of Health

The Centre for Health Protection is a professional arm of the Department of Health for disease prevention and control

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Dengue Fever

Causative agent

Dengue fever is an acute mosquito-borne infection caused by the dengue viruses. This is found in tropical and sub-tropical regions around the world. For instance, dengue fever is an endemic illness in many countries in South East Asia. The dengue viruses encompass four different serotypes, each of which can lead to dengue fever and dengue haemorrhagic fever.

Clinical features

Dengue fever is clinically characterised by sudden onset of high fever, severe headache, pain behind the eyes, muscle and joint pains, anorexia, nausea and rash. Young children may exhibit a milder non-specific febrile illness with rash.

Dengue haemorrhagic fever is a severe and potentially fatal complication of dengue fever. Initially, the features include high fever, which lasts two to seven days and can be as high as 40-41 °C, facial flush and other non-specific constitutional symptoms of dengue fever. Later, it may be followed by the manifestation of bleeding tendency such as skin bruises, nose or gum bleeding, and possibly internal bleeding. In severe cases, it may progress to circulatory failure, shock and die.

Immunity is gained against that serotype after recovery from its infection. However, no effective protection is conferred against subsequent infection by the other three serotypes.

Mode of transmission

Dengue fever is transmitted to humans through by the bites of female *Aedes* mosquitoes which are infected with a dengue virus. It cannot be spread directly from human to human. In Hong Kong, the principal vector *Aedes aegypti* is not found, but the prevailing species *Aedes albopictus* can also spread the disease.

Incubation period

The incubation period ranges from 3 to 14 days, commonly 4 to 7 days.

Management

There is no specific medication for dengue fever or dengue haemorrhagic fever. Dengue fever is mostly self-limiting. Symptomatic treatment is given to provide relief from fever and pain. Patients with dengue haemorrhagic fever should be treated promptly with supportive management. The mainstay of the treatment is to maintain the circulating fluid volume. With appropriate and timely treatment, mortality rate should be less than 1%.

Prevention

At present, no effective vaccine for dengue fever is available. Therefore, the best preventive measure is to eliminate pockets of stagnant water that serve as sites of mosquito breeding, and to avoid mosquito bites.

General Measures on Preventing Mosquito-borne Diseases

1. Wear long-sleeved clothing and trousers, and apply effective mosquito repellent containing DEET to exposed parts of the body & clothes.
2. Use mosquito screens or nets when the room is not air-conditioned.
3. Place mosquito coil or electric mosquito mat / liquid near possible entrance, such as window, to prevent mosquito bites.
4. Prevent the accumulation of stagnant water
 - Put all used cans and bottles into covered dustbins.
 - Change water for plants at least once a week, leaving no water in the saucers underneath flower pots.
 - Cover tightly all water containers, wells and water storage tanks.
 - Keep all drains free from blockage.
 - Top up all defective ground surfaces to prevent the accumulation of stagnant water.

If you notice any mosquito breeding sites in public places, you may call the Food and Environmental Hygiene Department Hotline at 2868 0000.

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