

Enterovirus 71 Infection



Causative agent

Enterovirus 71 (EV71) is a single-stranded RNA virus and is one of the causative agents for hand, foot and mouth disease (HFMD). EV71 infection occurs commonly in Southeast Asian areas, especially in summer and early autumn. Outbreaks have been reported in Australia, Mainland China, Malaysia, Singapore, Taiwan, etc.

Clinical features

EV71 infection usually affects young children. Patients commonly present with symptoms of HFMD, characterised by fever, sores in the mouth and a rash with blisters. The illness usually begins with fever, poor appetite, tiredness and sore throat. One or two days after fever onset, painful sores may develop in the mouth. They begin as small red spots with blisters and then often become ulcers. They usually appear on the tongue, gum and inside of the cheeks. There may also be a skin rash that is non-itchy and sometimes accompanied by blisters. The rash usually appears on the palms of the hands and soles of the feet and may also appear on the buttocks and/or genitalia. A person with HFMD may not have symptoms, or may only have rash or mouth ulcers. EV71 may cause more serious diseases, such as viral (aseptic) meningitis, encephalitis, poliomyelitis-like paralysis and myocarditis.

Mode of transmission

The disease mainly spreads by contact with an infected person's nose or throat discharges, saliva, fluid from vesicles or stool, or after touching contaminated objects. The disease is contagious during the acute stage and perhaps longer, as faecal shedding of virus can continue for several weeks.

Incubation period

The incubation period commonly ranges from 3 - 5 days.

Management

Currently, no specific treatment is available for EV71 infection. Symptomatic treatment can relieve fever and pain from the ulcers. In most cases, the illness is self-limiting and symptoms including fever, rash and ulcers usually subside in a week. Parents should pay attention to the health of their children and seek medical advice immediately if their children having HFMD develop the following symptoms:

- persistent and high fever
- repeated vomiting
- persistent sleepiness or drowsiness
- myoclonic jerks or sudden limb weakness

Infected children are advised to refrain from schools or group activities such as parties, interest classes and swimming until 2 weeks after fever has subsided and all the vesicular lesions have dried and crusted to prevent the spread of disease. Protect other family members, especially children, from getting the infection through strict personal and environmental hygiene.

Prevention

Vaccine to prevent EV71 infection is not available in Hong Kong at the moment. Good personal and environmental hygiene are the mainstay of prevention.

1. Maintain good personal hygiene

- Perform hand hygiene frequently, especially before and after touching the mouth, nose or eyes; before eating or handling food; after touching blister; and after using the toilet.
- Wash hands with liquid soap and water, and rub for at least 20 seconds. Then rinse with water and dry with either a clean cotton towel or a paper towel. Alcohol-based handrub should not substitute hand hygiene with liquid soap and water, as alcohol does not effectively kill some viruses (e.g. EV71) causing HFMD.

- Cover your mouth and nose with tissue paper when coughing or sneezing. Dispose of soiled tissue paper into a lidded rubbish bin, then wash hands thoroughly.
- Use serving chopsticks and spoons at meal time. Do not share food and drinks with others.
- Do not share towels and personal items with others.
- Avoid close contact (such as kissing, hugging) with infected persons.
- Refrain from work or attending class at school, and seek medical advice if feeling unwell.
- Exclude infected persons from handling food and from providing care to children, elderly and immunocompromised people.

2. Maintain good environmental hygiene

- Regularly clean and disinfect frequently touched surfaces such as furniture, toys and commonly shared items with 1:99 diluted household bleach (mixing 1 part of 5.25% bleach with 99 parts of water), leave for 15 - 30 minutes, and then rinse with water and keep dry.
- Use absorbent disposable towels to wipe away obvious contaminants such as respiratory secretions, vomitus or excreta, and then disinfect the surface and neighbouring areas with 1:49 diluted household bleach (mixing 1 part of 5.25% bleach with 49 parts of water), leave for 15 - 30 minutes and then rinse with water and keep dry.
- Avoid group activities when HFMD outbreak occurs in the school or institution. Besides, minimise staff movement and arrange the same group of staff to take care of the same group of children as far as possible.

