Hand Foot Mouth Disease (HFMD)

Causative Agent

- Majority is by coxsackieviruses A & B.
- Minority is by enteroviruses 71 (EV 71).

Individual cases and outbreaks occur worldwide.
Usual peak in early summer to autumn, with smaller peak in winter.

Mode of Transmission

- Direct contact with saliva, nose and throat discharges or stool of infected persons.
- Direct contact with fluid from blisters of infected persons.
- Direct contact with infected substances like toys, food utensils, towels or carpets etc.

Person who gets Hand Foot Mouth Disease (HFMD) in the first week is the easiest to infect others; the infectious period of stool can be up to several weeks.

Incubation Period

Usually 3 to 7 days

Clinical Features

EV71 infection is usually found among young children.
By 20 years of age, 20-30% of the population have not acquired any protective antibodies of this disease. If adults are infected, they may develop more severe symptoms.

- Main symptoms are fever, sores in the mouth, and a rash with blisters.
- Usually it begins with fever, poor appetite, malaise and sore throat.
- 1 to 2 days later, painful ulcers develop in the mouth, and may affect the swallowing function.
- The sores are characterised by small red spots with blisters, which then often become ulcers.
- Ulcers usually located on the tongue, gums and the inside of the cheeks.
- The rash is usually found on the palms of hands and soles of the feet.
- The non-itchy skin rash manifests as flat or raised red spot, which usually found on palms of hands and soles of feet.

Complications

- In most cases, the illness is self-limiting.
- Symptoms including fever, rash and ulcers subside spontaneously in 1 week.
- Rarely, EV 71 may cause more serious diseases, such as encephalitis, a poliomyelitis-like paralysis, myocarditis and even death.

Treatment and Management

- No specific treatment is available for HFMD.
- Patient should drink plenty of water and take adequate rest.
- Symptomatic treatment is given to provide relief from fever, aches or pain from the ulcers.
- Seek prompt medical attention if develop high fever, decrease in alertness or deterioration of general condition.
- Parents should pay attention to the health of their children and seek prompt medical advice if their children developing the following symptoms:
  - Persistent and high fever;
  - Repeated vomiting;
  - Persistent sleepiness or drowsiness;
Myoclonic jerks or sudden limb weakness.

Those who handle nose or throat discharges, faeces and soiled articles should wash hands promptly afterwards.

Management of Outbreak of HFMD in the University

- If there is staff or students with symptoms of HFMD, segregate the sick persons as soon as possible. Advise them to seek prompt medical attention and rest at home.
- Report the cases to University Health Service by calling 2859 2514 or email uhealth@hku.hk.
- The person with HFMD should be excluded from school or any group activities, hall residents should go home, until fever resolves and all blisters dry up.
- Clean the sick persons’ room and their belongings thoroughly with 1:49 diluted household bleach, followed by rinsing/ wiping with clean water.
- Clean and disinfect frequently touched surface, furniture and toilets regularly with 1:49 diluted household bleach.

Prevention

- Good personal and environmental hygienic practices.
- Maintain good air circulation.
- Wash hands before meals and after going to the toilet, handling stool soiled materials.
- Keep hands clean and wash hands properly, especially when they are made dirty by respiratory secretions, such as after sneezing.
- Cover nose and mouth while sneezing or coughing and dispose of nasal and mouth discharge properly.
- Staff/Students with HFMD should be excluded from school or any group activities, until fever resolves and all blisters dry up.
- Infected children should refrain from schools or group activities such as parties, interest classes, swimming until fever has subsided and all the vesicular lesions have dried and crusted to prevent the spread of disease.
- As EV71 is associated with higher risk of complications and the virus may be excreted in stool for some weeks, Centre for Health Protection advises children suffering from laboratory confirmed EV71 infections to stay away from school for two additional weeks after symptoms have subsided.
- Protect other family members, especially children, from getting the infection through strict personal and environmental hygiene.
- Clean the sick persons’ room and their belongings thoroughly with 1:49 diluted household bleach, followed by rinsing/ wiping with clean water.
- Clean and disinfect frequently touched surface, furniture and toilets regularly with 1:99 diluted household bleach. If there is outbreak, use 1:49 diluted household bleach instead.
- Avoid going to overcrowded places.
- Avoid close contact (such as kissing, hugging, sharing eating utensils or cups, etc.) with infected persons.

For more information about HFMD, please refer to Centre for Health Protection webpage: http://www.chp.gov.hk/en/view_content/16354.html

Source: Centre for Health Protection

Reference:
1. Holger F. Rabenau · Matthias Richter · Hans Wilhelm Doerr, Hand, foot and mouth disease: seroprevalence of Coxsackie A16 and Enterovirus 71 in Germany. Med Microbiol Immunol 199:45-51

August 2, 2013