

Guidelines for Hand Foot and Mouth Disease HFMD

Hand, foot, and mouth disease, or HFMD, is a contagious illness caused by different viruses. Infants and children younger than 5 years are more likely to get this disease. However, older children and adults can also get it.

Case definition

Clinical case definition Case of HFMD:

Any child with:

- a. mouth / tongue ulcer and
- b. maculopapular rashes and /or vesicles on palms and soles
- c. with OR without history of fever

Suspected:

A case that meets the clinical case definition.

Confirmed:

A suspected case in which laboratory investigation confirms the presence of virus OR when cases are epidemiologically linked to a laboratory confirmed case

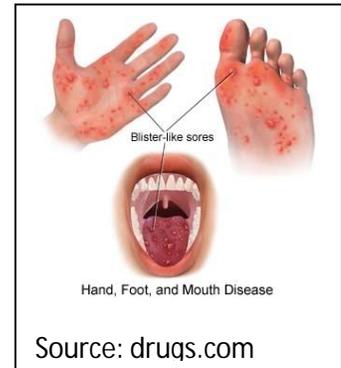
Laboratory criteria

Any case that has the clinical symptoms and positive for viruses (coxsackieviruses(Cox) A16, A5, A9, A10, B2, B5 and enterovirus (EV) 71) which could cause HFMD, isolated or detected from stool or vesicle fluid or mouth ulcer or saliva.

Clinical Presentation

Hand, foot, and mouth disease usually starts with a fever, poor appetite, a vague feeling of being unwell (malaise), and sore throat. One or 2 days after fever starts, painful sores usually develop in the mouth (herpangina). They begin as small red spots that blister and that often become ulcers. The sores are often in the back of the mouth. A skin rash develops over 1 to 2 days. The rash has flat or raised red spots, sometimes with blisters. The rash is usually on the palms of the hands and soles of the feet; it may also appear on the knees, elbows, buttocks or genital area.

Persons infected with the viruses that cause hand, foot, and mouth disease may not get all the symptoms of the disease. They may only get mouth sores or skin rash.



The viruses that cause hand, foot, and mouth disease (HFMD) can be found in an infected person's:

- nose and throat secretions (such as saliva, sputum, or nasal mucus),
- blister fluid, and
- feces (stool).

An infected person may spread the viruses that cause hand, foot, and mouth disease through:

- close personal contact,
- the air (through coughing or sneezing),
- contact with feces,
- contaminated objects and surfaces.

A person with hand, foot, and mouth disease is most contagious during the first week of illness. People can sometimes be contagious for days or weeks after symptoms go away. Some people, especially adults, who get infected with the viruses that cause hand, foot, and mouth disease may not develop any symptoms. However, they may still be contagious. This is why people should always try to maintain good hygiene (e.g. handwashing) so they can minimize their chance of spreading or getting infections.

Hand, foot, and mouth disease is not transmitted to or from pets or other animals.

Complications

- Viral or "aseptic" meningitis can occur with hand, foot, and mouth disease but it is rare. It causes fever, headache, stiff neck, or back pain.
- Inflammation of the brain (encephalitis) can occur, but this is even rarer.
- Fingernail and toenail loss have been reported, occurring mostly in children within 4 weeks of their having hand, foot, and mouth disease.

Diagnosis

Depending on how severe the symptoms are, samples from the throat or stool may be collected and sent to a laboratory to test for the virus.

Clinical Management

There is no specific treatment for hand, foot and mouth disease. However, some things can be done to relieve symptoms, such as

- Taking over-the-counter medications to relieve pain and fever (Caution: Aspirin should not be given to children.)
- Using mouthwashes or sprays that numb mouth pain

Mild HFMD cases only need symptomatic treatment. Treatment of fever and relief of symptoms, adequate hydration and rest are important. Parents and care takers should be educated on hygiene and measures that they should take to prevent transmission to other children.

Hospitalization.

Criteria for admission

- When the child is unable to tolerate oral feeds and there is a need for intravenous hydration;
- When the child is clinically very ill or toxic-looking
- When some other more serious disease cannot be excluded
- When there is persistent hyperpyrexia (e.g $>38^{\circ}\text{C}$) for >48 hours;
- When there is a suspicion of neurological complications, e.g increased lethargy, myoclonus, increased drowsiness, change in sensorium and/or seizures;
- When there is a suspicion of cardiac complications (myocarditis), e.g low blood pressure, low pulse volume, heart rhythm abnormalities, murmurs, gallop rhythm, displaced apex beat;
- When parents are unable to cope with child's illness; and
- When there is inadequate family or social support in looking after the child at home.

Infection control

- Proper hygiene including mandatory hand washing after contact with patient, appropriate cleanliness during diaper changes is imperative
- Personal items such as spoons, cups and utensils should not be shared and should be properly washed with detergent after use;
- The use of gowns may act as a useful protection for health personnel looking after these patients; and
- Patients with HFMD should be isolated and the usual isolation procedures followed for infection control.
- Articles such as toys contaminated by infected cases are disinfected with 0.5% sodium hypochlorite solutions
- A high standard of food and personal hygiene is maintained by the institution involved which include proper waste and diapers disposal.

ADVICE GIVEN UPON PATIENT'S DISCHARGE

- Parents and guardians should be advised upon patients discharge on complications that may occur; a statement as shown below can be given:
- “Your child has been diagnosed to have hand-foot-mouth disease. This disease is normally not dangerous but in the light of recent events, we advise that you bring back your child to this hospital if he / she has any of the following symptoms:
 - High fever.
 - Lethargy and weakness.
 - Refusing feeds and passing less urine.
 - Rapid breathing.
 - Vomiting.
 - Drowsiness or irritably.
 - Fits.”

Prevention

There is no vaccine to protect against the viruses that cause hand, foot, and mouth disease.

A person can lower their risk of being infected by

- Washing hands often with soap and water, especially after changing diapers and using the toilet. Cleaning and disinfecting frequently touched surfaces and soiled items, including toys.
- Avoiding close contact such as kissing, hugging, or sharing eating utensils or cups with people with hand, foot, and mouth disease.

If a person has mouth sores, it might be painful to swallow. However, drinking liquids is important to stay hydrated. If a person cannot swallow enough liquids, these may need to be given through an IV in their vein.

Right Method of Washing Hands

- **Wet your hands** with clean, running water (warm or cold) and apply soap.
- **Rub your hands** together to make lather and scrub them well; be sure to scrub the backs of your hands, between your fingers, and under your nails.
- **Continue rubbing** your hands for at least 20 seconds. Need a timer? Hum the "Happy Birthday" song from beginning to end twice.
- **Rinse your hands** well under running water.
- **Dry your hands** using a clean towel or air dry them.

How do you use hand sanitizers?

- Apply the product to the palm of one hand.
- Rub your hands together.
- Rub the product over all surfaces of your hands and fingers until your hands are dry.

If the outbreak occurs in primary schools;

- Principals, teachers and supervisors shall be alerted to look out for children with fever, rash / blisters on palms and soles and to isolate them immediately. Screening before coming to class is recommended
- Ensure that the infected children remain away from the institution for at least ten days after onset of symptoms and must be certified free from infection by a registered medical practitioner prior to returning to school
- Health education to the students on the disease, mode of transmission, importance of good personal hygiene.
- If closure is necessary, just closed the affected class. Closure of the whole school is unnecessary as HFMD in older children is usually very mild and so far no complication has been documented from this age group.

Investigation form for HFMD

Date

Name Age /Sex.....

Address.....

Hospital Name

Date of Onset Of illness.....

Symptoms

Fever >38⁰C Y N

If Yes, Date of Onset of Fever.....

Loss of appetite

Malaise

Sore Throat

Painful sores in the mouth (Hyperangina)

Rash Y N

If yes, date of appearance of rash

Area of rash

Palms Soles Knees Elbow Buttocks Genital Area

Anybody Else in School / family having same problem Y N

Type of Sample Collected

Rectal Swab Mouth ulcer Vesicle Swab Stool Throat Swab

Note * : All samples except blood / serum and stool must be in the viral transport media (VTM) and send immediately in ice pack to NCDC Microbiological Laboratory.

Name & Signature of Physician

Contact Number