



WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit
Ministry of Healthcare and Nutrition

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Hand—Foot and Mouth Disease : Fact Sheet

There are unconfirmed reports reached to the Epidemiology Unit that hand foot and mouth disease cases are being reported to hospitals.

Hand-foot-and-mouth disease (HFMD) is mainly an illness of infants and children. It is caused by a group of enteroviruses. It is different to hoof-and-mouth disease in cattle, sheep and swine mainly due to the causative agent.

Infectious Agent

Several different viruses act as causative agent for Hand-foot-and-mouth disease. The main a etiological agent is Coxsackie Group A type 16. Coxsackievirus is a subgroup of the enteroviruses and is a member of the family Picornaviridae. Coxsackievirus group A types 4, 5, 9 and 10 are also known to cause Hand-foot-and-mouth disease occasionally.

Enterovirus 71 and Coxsackie virus types 2 and 5 have also been implicated in cases as well as outbreaks of Handfoot- and-mouth disease.

Reservoir

Humans are the only known reservoir for Coxsackie virus.

Occurrence

The disease occurs worldwide both sporadically and in epidemics. It is seen mainly among children under 10 years of age. However, adult cases are not unusual and

young adults also are affected. In Sri Lanka, the most recent period with relatively higher incidence was in 2005 when 75 cases were reported for the year. Outbreaks have been reported from Singapore, Malaysia and Taiwan recently.

Mode of Transmission

Hand-foot-and-mouth disease is moderately contagious. The disease spreads through direct contact with aerosol droplets, nasal discharge, throat secretions, faeces and vesicular fluids of infected persons. It can also spread through indirect contact with articles contaminated by secretions of infected patients. Reliable evidence of spread via pets, insects, water and food are not available.

Incubation Period

Incubation period of Hand-foot-and-mouth disease usually ranges from 3-5 days.

Period of Communicability

An infected person is most contagious during the first week or the acute phase of the illness. However this period of communicability may be longer, since the virus persists in stools for several weeks.

Immunity

Infection results in immunity for the specific virus that caused the infection, but a second infection is possible from a different strain of the virus of the same enterovirus family.

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Clinical Features

Hand-foot-and-mouth disease is an acute self-limiting disease characterised by fever, diffuse oral lesions and a vesicular skin rash. The disease begins with a mild fever, loss of appetite, malaise and frequently a sore throat. One or two days after the onset of fever, small red spots occur in the mouth, which develop into blisters and then they often become ulcers. These lesions are usually found on the buccal surface of the cheeks, gums and sides of the tongue. Simultaneously, a non-pruritic vesicular rash develops over a day or two. This rash occurs mainly on the palms, fingers and soles of the feet. Occasionally, lesions may appear on the back of the elbows, front of the knees and on the buttocks. This may be the reason for the nomenclature 'Hand-foot-mouth-butt disease'. The papulovesicular lesions may persist from 7 to 10 days. A person with Hand-foot-and-mouth disease may have only the rash or only the mouth ulcers. The illness is typically mild and it usually resolves in 7-10 days.

Complications

Complications from the virus infection that cause hand foot and mouth disease are not common. If they do occur, medical care should be sought. Viral or aseptic meningitis can rarely occur with hand foot and mouth disease. Viral meningitis causes fever, headache, neck stiffness or back pain. The condition is usually mild and clears without treatment. However, some patients may need to be hospitalized for a short time.

Other more serious diseases such as encephalitis, myocarditis or even more rarely polio like paralysis can result. Encephalitis can be fatal. There have been reports of finger nail and toenail loss occurring mostly children within four weeks of their having hand foot and mouth disease. At this time, it is not known whether the reported nail loss is or is not a result of the infection. However, in the reports reviewed, the nail loss has been temporary and nail growth resumed without medical treatment.

Deaths from Hand foot and mouth disease have been reported. Fifty deaths were reported from Malaysia in 1997 and 78 from Taiwan in 1998. The victims were mainly young children.

Diagnosis

The diagnosis is mainly clinical based on the appearance of the vesicular rash on the hands, feet and mouth in a child with a mild febrile illness. However oral lesions should be differentiated from stomatitis caused by herpes simplex virus, which are deeper, larger and more painful ulcerative lesions and commonly located in the anterior part of the mouth.

Laboratory Diagnosis

Specific laboratory tests are available to confirm the diagnosis. Stools are the most important specimen or virus isolation, as the virus content in stools is high and the period of viral excretion is long. Other specimens such as CSF and swabs from oral ulcers or vesicular skin lesions sent in appropriate transport medium (Hank's virus transport medium) can also be used for virus isolation.

Treatment

There is no specific treatment for Hand-foot-and-mouth disease. Symptomatic treatment is given to provide relief from fever and pain from mouth ulcers. Salt water mouth rinses (half-teaspoon of salt to one glass of warm water) may be soothing if the child is able to rinse without swallowing. Although swallowing may be painful, the child should be encouraged to take adequate quantities of fluids to avoid dehydration.

Methods of Control

(1) General Preventive Measures

Person to person contact should be restricted if possible and ventilation should be improved. Hand washing and other general personal hygienic measures should be promoted.

(2) Control of Infected Persons and Contacts

Infected children should be kept away from childcare centers, schools and other crowded public places during the first few days of the illness. Nose and throat discharges of infected persons should be is infected. Careful attention should be paid to prompt hand washing especially after diaper changes and when handling discharges, faeces and soiled articles. Quarantine is not recommended. Specific immunization against the disease is not available.

Complications

Hand-Foot-and-Mouth Disease

- Is caused by one of several types of viruses.
- Anyone can get Hand-foot-and-mouth disease, but mainly children under 10 years are affected.
- Usually spreads through person-to-person contact.
- The symptoms are similar to a common cold with oral ulcers and a rash.
- There is no specific treatment other than symptomatic relief measures.

Table 1: Vaccine-preventable Diseases & AFP

08th - 14th May 2010(19th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2010	Number of cases during same week in 2009	Total number of cases to date in 2010	Total number of cases to date in 2009	Difference between the number of cases to date in 2010 & 2009
	W	C	S	N	E	NW	NC	U	Sab					
Acute Flaccid Paralysis	00	01	00	00	01	00	00	01	00	03	01	33	26	+ 26.9 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	-
Measles	00	00	00	00	00	00	00	00	00	00	01	36	46	- 21.7 %
Tetanus	00	00	00	00	00	00	00	00	00	00	00	09	10	- 10.0 %
Whooping Cough	00	00	00	00	00	00	00	00	00	00	01	07	24	- 70.8 %
Tuberculosis	69	46	09	15	15	21	21	00	39	235	191	3362	3259	+ 03.1 %

Table 2: Newly Introduced Notifiable Disease

08th - 14th May 2010(19th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2010	Number of cases during same week in 2009	Total number of cases to date in 2010	Total number of cases to date in 2009	Difference between the number of cases to date in 2010 & 2009
	W	C	S	N	E	NW	NC	U	Sab					
Chickenpox	04	06	07	06	06	06	13	04	08	60	517	1513	7050	- 78.5 %
Meningitis	13 CB=9 GM=2 KL=2	04 NE=1 KN=3	02 GL=1 MT=1	00	00	05 KN=4 PU=1	02 AP=2	01 BD=1	04 RP=2 KG=2	31	10	592	381	+ 55.4 %
Mumps	01	00	02	02	02	01	07	02	02	19	24	342	682	- 49.8 %
Leishmaniasis	00	00	02 HB=2	00	00	00	04 AP=3 PL=1	00	00	06	05	139	384	- 63.8 %

Key to Table 1 & 2

Provinces: W: Western, C: Central, S: Southern, N: North, E: East, NC: North Central, NW: North Western, U: Uva, Sab: Sabaragamuwa.
 DPDHS Divisions: CB: Colombo, GM: Gampaha, KL: Kalutara, KD: Kandy, ML: Matale, NE: Nuwara Eliya, GL: Galle, HB: Hambantota, MT: Matara, JF: Jaffna, KN: Killinochchi, MN: Mannar, VA: Vavuniya, MU: Mullaitivu, BT: Batticaloa, AM: Ampara, TR: Trincomalee, KM: Kalmunai, KR: Kurunegala, PU: Puttalam, AP: Anuradhapura, PO: Polonnaruwa, BD: Badulla, MO: Moneragala, RP: Ratnapura, KG: Kegalle.

Data Sources:

Weekly Return of Communicable Diseases: Diphtheria, Measles, Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps.

Special Surveillance: Acute Flaccid Paralysis.

Leishmaniasis is notifiable only after the General Circular No: 02/102/2008 issued on 23 September 2008.

10th South East Asia Regional Scientific Meeting of the International Epidemiological Association
23rd - 26th May 2010

Colombo, Sri Lanka

Theme

"Epidemiological Methods in Evidence Based Healthcare"

Visit <http://www.episea2010.com>

Table 4: Selected notifiable diseases reported by Medical Officers of Health
08th - 14th May 2010(19th Week)

DPDHS Division	Dengue Fever / DHF*		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human Rabies		Returns Received %
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	
Colombo	44	1723	3	71	0	6	1	25	7	14	18	232	0	3	0	25	0	1	85
Gampaha	7	1706	0	16	0	10	3	18	0	8	0	157	0	4	0	36	0	3	27
Kalutara	9	518	0	58	0	8	0	7	36	65	5	143	0	0	0	15	0	1	75
Kandy	24	603	14	112	0	1	1	12	0	2	5	29	1	69	0	25	0	1	78
Matale	1	336	1	186	0	1	0	8	0	63	2	45	0	4	0	23	0	0	75
Nuwara	4	64	15	106	0	0	2	50	11	81	0	9	2	34	2	22	0	0	62
Galle	15	327	5	81	0	4	0	0	0	9	4	32	0	3	0	6	0	3	89
Hambant	6	313	1	16	0	2	0	1	3	6	2	23	1	43	0	4	0	0	73
Matara	6	160	6	53	0	1	1	2	0	39	9	142	3	69	0	9	0	0	100
Jaffna	26	2034	4	71	0	1	5	317	0	5	0	1	0	98	0	33	1	2	67
Kili-	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	25
Mannar	3	84	0	16	0	0	2	28	0	4	0	0	0	0	0	12	0	0	60
Vavuniya	0	484	1	16	0	1	0	25	0	7	1	1	0	0	0	10	0	1	75
Mullaitivu	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Batticaloa	7	992	2	48	0	2	0	15	0	25	0	5	0	1	1	2	0	1	50
Ampara	1	70	1	27	0	1	0	4	0	6	1	20	0	0	0	9	0	0	57
Trincomal	11	736	18	68	1	6	0	3	0	7	0	8	1	7	0	12	1	1	80
Kurunega	28	530	11	95	1	7	1	14	0	6	4	150	0	22	3	52	0	2	95
Puttalam	11	543	0	27	0	3	0	35	4	24	1	54	0	0	0	9	0	0	89
Anuradha	8	737	0	28	0	2	0	4	0	21	0	31	0	18	0	23	0	3	68
Polonnar	5	182	5	29	0	1	0	1	4	7	1	39	1	1	0	17	0	0	100
Badulla	15	262	3	68	0	1	3	49	0	13	1	29	2	37	2	40	0	0	80
Monaraga	15	239	3	76	0	1	0	19	0	4	1	24	0	26	1	49	0	1	73
Ratnapur	27	811	9	149	0	4	0	9	0	22	2	167	0	30	0	44	0	1	50
Kegalle	6	371	6	37	0	4	0	25	0	16	3	89	2	7	1	39	0	0	82
Kalmunai	2	458	5	78	0	1	0	5	0	0	0	0	0	0	0	7	0	1	62
SRI LANKA	281	14284	113	1533	02	68	19	677	65	54	60	1430	13	476	10	523	02	22	71

Source: Weekly Returns of Communicable Diseases WRCD).

*Dengue Fever / DHF refers to Dengue Fever / Dengue Haemorrhagic Fever.

**Timely refers to returns received on or before 14th May, 2010 Total number of reporting units =311. Number of reporting units data provided for the current week: 228

A = Cases reported during the current week. B = Cumulative cases for the year.

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Comments and contributions for publication in the WER Sri Lanka are welcome. However, the editor reserves the right to accept or reject items for publication. All correspondence should be mailed to The Editor, WER Sri Lanka, Epidemiological Unit, P.O. Box 1567, Colombo or sent by E-mail to chepid@sltnet.lk.

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