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EDITORIAL

Hand, foot and mouth disease: current understanding of the aetiology, epidemiology, and prevention of clinical symptoms

The first hand, foot, and mouth disease (HFMD) was reported in New Zealand in 1957. It was named after its clinical characteristics and has caused millions of attacks and multiple global epidemics. Over the past decade, HFMD has become more prevalent in the Asia-Pacific region and a significant global public health issue (1-6). As well as frequent infection in East and South-East Asia during the hot and humid season among children aged 1 to 5. In crowded and enclosed situations, such as kindergartens and child daycare centers, infected droplets can rapidly spread by sharing objects and surfaces (fomites) (7). This infectious childhood disease is characterised by sores in the mouth and rashes on the hands and feet caused by a virus. Most patients experience moderate symptoms, including low-grade fever, rashes, and herpes on the hands, feet, and lips. A few patients may develop meningitis, encephalitis, pulmonary oedema, and circulatory issues and may even perish from the disorders (8)

Infection occurs via direct touch, droplets, respiratory secretions such as saliva, sputum, and nasal discharge, contact with blister fluid from infected individuals, and other excretory materials of an infected individual. In addition to coxsackievirus A16 and enterovirus 71, different strains of coxsackievirus and enterovirus may cause the disease (9, 10). There are more cases found in Bangladesh during the monsoon season and fewer during the dry season. Clusters of HFMD instances occur between June and October, when the monthly average temperature, total rainfall, and humidity are at their highest levels of the year compared to the dry season [11]. The hand, foot, and mouth disease is typically diagnosed clinically. Approximately six weeks after infection, the virus can be discovered in the stool; however, the duration of virus shedding from the oropharynx is often less than four weeks. Light microscopy of vesicle biopsies

Note: Adapted from "Enterovirus-Associated Hand-Foot and Mouth Disease and Neurological Complications in Japan and the Rest of the World", by Gonzalez G, Carr MJ, Kobayashi M, Hanaoka N and, Fujimoto T, 2019, Int. J. Mol. Sci, 20(20):5201.

or scrapings distinguishes HFMD from varicella-zoster virus and herpes simplex virus. Although serology is not sensitive enough to diagnose HFMD, IgG levels can be used to track recovery. In some places, serology is employed to distinguish between enterovirus 71 and coxsackievirus since this distinction has prognostic importance. In most sites, polymerase chain reaction assays are currently available to confirm the diagnosis of coxsackievirus. Using real-time PCR, a lesion swab can detect coxsackievirus or enterovirus (12-14). Hand, foot, and mouth illness is a modest clinical condition that resolves in seven to ten days. Primarily, treatment is supportive. NSAIDs and acetaminophen can be used to alleviate both pain and fever. It is essential to ensure that the patient keeps adequately hydrated. In addition, a mixture of liquid ibuprofen and liquid diphenhydramine can be gargled to coat ulcers and alleviate discomfort (15, 16). It was discovered that steroids enhance the likelihood of severe HFMD (17). Education of patients and parents is essential for preventing the spread of HFMD among children and also between children and adults. Hand washing has been shown to be an effective method for preventing the spread of HFMD (18). A community intervention study revealed that parental and child personal hygiene improved as a result of rigorous teaching on hand hygiene procedures. Consequently, the incidence of HFMD in the study population decreased (19). Due to the possibility of severe sickness, parents should also be warned to keep their children away from immunocompromised individuals.

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