

Hand, Foot and Mouth Disease and Care: A Short Case Report

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INTRODUCTION

Hand, foot and mouth disease (HFMD) is a enteroviral infection occurring in early childhood. It is clinically characterized by erosive stomatitis that occurs with a vesicular and maculopapular rash which is frequently observed in the hands and feet (1). Generally a mild-self recoverable disease some of the recent outbreaks have reported fatal cardiopulmonary and serious neurological complications when Enterovirus 71 is the causative agent (2-3). We report a case of a eleven-year old child presented with typical features of HFMD.

Keywords: Hand-foot-mouth disease, care, child, viral eruption

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CASE REPORT

A 11 years old girl presented with a 5-day history of mild fever and malaise and a 3-day history of a vesicular rash involving his hands and feet. The patient experienced a severe itching over the papules.

Informed consent was obtained from the parent as a part of the routine protocol before the clinical examination. On examination, the patient was febrile and had a body temperature of 38.6°C. Many papules were noted on the palm (Fig. 1) and foot (Fig. 2). Intraoral examination revealed multiple reddish macules, measuring approximately 2 mm in diameter in the roof of the hard palate. No other lesions were present intraorally.



Fig. 1: Maculopapular rash are shown for patient's palm infected with HFMD

This clinical picture is highly characteristic of hand, foot, and mouth disease. The patient was treated supportively at home. The patient was advised to consume plenty of fluids and was prescribed paracetamol syrup to control fever, topical local anesthetic for intraoral application, antihistamine syrup to reduce itching and calamine lotion for topical application. Family was informed about the care of child at home. At follow-up 1 week later, her systemic symptoms had improved and the skin lesions were resolving. The patient was followed up for 1 months and no recurrence was noted.



Fig. 2: Maculopapular rash are shown for patient's foot infected with HFMD

DISCUSSION

HFMD is one of the more distinctive rash syndromes caused by enteroviruses. It is most frequently caused by coxsackievirus A16, but can also be caused by enterovirus 71; coxsackie A viruses 5, 7, 9, and 10, and coxsackie B viruses 2 and 5. HFMD was first reported in New Zealand in 1957. Coxsackievirus A16 was first identified next year in 1958 in Canada. Large outbreaks of HFMD were first reported in Malaysia and Taiwan between 1997-1998 (4-5), and regular epidemics have been reported in countries across the Asia Pacific region, in particular in China (6). Over the last five years, coxsackievirus A6 has been identified as a causative agent in outbreaks in Europe, South-East Asia and America (3). There is a dramatic increase in the frequency of hand-foot-mouth disease at Dermatovenerology Department of İstanbul Medical Faculty in June 2013 compared to previous years (7).

HFMD most commonly affects children under 10 years of age. Older children and adults are sometimes affected. Adults and older children with HFMD tend to develop a milder form of the illness compared with younger children. Commonly occurring in childhood HFMD comes in cycles of 3- 4 years. The prodromal phase, including low-grade fever, malaise and sore throat is commonly observed. Starting with mild fever disease is characterized by sudden eruptions of papulovesicular rash. The oropharynx is inflamed and contains scattered vesicles on the tongue, buccal mucosa, posterior pharynx, palate, gingiva, and/or lips. These may ulcerate, leaving 4-8 mm shallow lesions with surrounding erythema. Maculopapular, vesicular, and/or pustular lesions may also occur on the hands and fingers, feet, and buttocks and groin; hands are more commonly involved than the feet. Lesions on the hands and feet are usually tender and vesicular and vary in size from 3-7 mm; they are generally more common on the dorsal surfaces but frequently occur on the palms and soles as well. Vesicles resolve in about 1wk. Buttock lesions do not usually progress to vesiculation. Disseminated vesicular rashes may complicate preexisting eczema. The disease usually improves spontaneously after 7-10 days without any complication. In severe disease, cardiorespiratory and neurological involvement may develop (1).

Children with HFMD were considered to have more serious illness if they have the following features: persistent highgrade fever associated with toxic and ill in appearance, recurrent vomiting (at least twice), tachycardia (heartrate- 150/min) breathlessness, poor perfusion (cold clammy skin), reduced consciousness (irritability, lethargy, drowsiness, and coma), limb weakness, meningism and seizures (8).

The diagnosis of HFMD is usually based on the clinical features. Viral culture using a combination of cell lines that support the growth of enteroviruses is the gold standard method for confirmation of infection. Although, this shares some clinical resemblance with other diseases like varicella zoster, papular urticaria, impetigo and pompholyx, the constellation of

features are unique enough to aid instant clinical diagnosis with certainty in almost all cases. HFMD is a generally self-limiting illness, and there are no specific drug treatments. However, symptomatic treatment often is required. Antipyretics are given to control fever and antihistamines to reduce itching. Topical local anesthetics can be prescribed for oral ulcers to improve patients' ability to consume a routine diet (9). Commonly used drugs include antiviral agents, antibiotics, and immunopotentiators, although there are few studies showing a clear improvement in outcome (10).

Vaccines for enteroviruses (other than poioviruses) are not available. The disease mainly spreads by contact with nose and throat discharges, saliva, fluid from vesicles or patients' stool, or through contaminated objects. Significant risk factors for infection are low socio-economic status and personal hygiene habits such as residence in rural areas, being member of a migrant population, not washing hands before eating, toy sucking, and low family income. Strict implementation of basic protocols like monitoring cleanliness of the hands, utensils and drinking water and avoiding direct contact with affected people can be rewarding. Restriction of the affected children from attending school or other outdoor activities is a very simple but effective strategy (11).

Family should be informed about the care of child at home. The suggested care methods as fallows;

To provide resting of child.

To check and keep bady temprature in normal range.

To increase oral liquide intake. Do not give citrus or corbonated drinks such as orange or lemonade and soda. These liquids may cause child's mounth to hurt more.

To feed with mild nutrients till mounth lesions remedy. Milk-based drinks or cold foods or room temperature drinks are often less painful to the child to swallow.

To clean her hands by washing gently with soap on water. Then patting the skin dry to avoid breaking the blister and spreading the infection.

The continuation of infectiousness until skin lesions disappear and the necessity of should not accept child visitors to home during this period were explained (12).

Hand, foot and mouth disease (HFMD) is a common acute viral illness with fever, oral ulcers, and vesicular rashes on the hands, feet and buttock as characteristic features. HFMD is usually a self-limited and benign condition; however, fatal cardiopulmonary and neurological complications may be occasionally observed cases with enterovirus 71 infection. All pediatricians, dermatologists and nurses should be aware of the clinical features of this disease and possible complications.

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