Hand, Foot and Mouth Disease - a Common but Overlooked Disease

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INTRODUCTION:

Hand, Foot, and Mouth Disease (HFMD) was first described clinically in New Zealand in 1957.It is a transmissible viral disease which often affects infants and children under 5 years of age but older children and adults could also be affected by this contagious disease[1].

The disease may not show typical features or may not manifest any symptoms in adults, but can still spread the virus to others[7]

HFMD, may not be confused with Foot & Mouth Disease (FMD) in animals which does not have human health significance.[1]HFMD has a seasonal pattern in temperate zones of Asia with a summer peak and spring -fall peaks in subtropical Asia[4].

Main manifestations includes fever, vesicular rashes on hand, feet and buttocks, feet, soles, perioral area, and oral ulcers/sores.The disease usually improves spontaneously within 7-10 days without any complication. In very rare cases, as severe disease, cardiorespiratory and neurological system may get involved[5].
Its incubation period ranges from 37 days. The viruses can be isolated from nasal& throat secretions, blister fluid, and feces [6].Mode of transmission includes person to person through close contact, the aerosols droplets (through coughing or sneezing), contact with feces, contact with contaminated objects and surfaces. First week of illness is the most transmissible period and sometimes remained contagious for many days after symptoms disappeared[7].

The diagnosis of HFM disease established on patient s history as well as typical clinical findings. Laboratory diagnosis can be done through RT-PCR by taking throat and vesicle swab samples, serum samples as well as Cerebrospinal fluid sample. For complicated cases like viral or aseptic meningitis CSF samples are useful[3,5].Disease process resolves spontaneously without using specific regimen and can be treated for symptomatic relief. Effective therapy or vaccine against the disease is still not available[9].

The level of disease knowledge and awareness among the formal and informal healthcare providers needs to be improved to identify index cases and disease magnitude can be ascertained[3]. Hand washing techniques, implementation of good sanitation practices, handling soiled utensils/equipments, safe drinking water and avoiding close contact with affected people to prevent cross contamination can be rewarding[10]. By staying home and avoiding other outdoor joint activities during illness is a very simple and effective strategy to prevent further spread of the disease among school going children.[11]

BACKGROUND:

Seven suspected cases of HFMD presented as outdoor patients from different areas of Islamabad during March 2017. A cluster of three cases was from same family and presented with few days interval. Similar cases were also reported from some areas of Rawalpindi. Details of the cases were gathered with the objectives to see any clustering and alert the healthcare providers to be vigilant in diagnosing similar cases in their areas.

METHODOLOGY:

Cases were enlisted, information was collected through a structured questionnaire and verified as an alertusing an operational case definitions. Operational Case definition for the cases and contact were formulated.

Probable Case: Febrile illness with papulo-vesicular rash on palms and soles, with or without vesicles/ulcers in the mouth. Rash may occasionally be maculo-papular without vesicular lesion, and may also involve the buttocks, knees or elbows, particularly in younger children and infants.

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Contacts: children residing in the same household or remained in close proximity with patient during the illness.

Review of clinical record and history was carried out besides active case finding in the area and enlisting exposed contacts. Informed consent was obtained from the parent before physical examination of the children and for any possible publication of the findings.

RESULTS:

Case 1: Mr. NK, a 4years old child presented with history of fever, reduced appetite and lethargy. On second day of fever, he developed mouth ulcers. The mouth sores started in the posterior side of the mouth, as small red spots, blistered and then became ulcers. Simultaneously, skin blisters appeared with few red spots on the palms of the hands and soles of the feet. Same rashes also found on the knees, elbows, buttocks or genital area. Blister fluid was collected in a sterile syringe and submitted to Virology lab in NIH. The child was treated symptomatically and recovered completely within a week time. Vesicles crusted in a week and the skin returned to normal in a month. Close contacts of the case 1 were enlisted according to case definition.

Cases 2:

A two years old boy (Mr. SM) from the same family reported on the 3rd day of illness of the case 1. He was in the same household and remained in close contact with case 1. History revealed that the child developed fever suddenly the previous night without any symptoms of flu. After 12 hours the parents noticed few papules; on the palm and soles. On the second day of illness, most of the papules had turned into fluid filled blisters and few blisters were present around the mouth. Following that he developed oral sores and difficulty to eat. The patient also complained severe itching over the papules. He was treated according to the symptoms with no antibiotics given at all. He recovered without any further deterioration within in a week time.

Case 3:

A 6years female child (Ms. HN) presented on the 5th day of illness of case 1 and 2nd day of the illness of case 2. The patient was febrile with a body temperature of 101.4°F. Papular rashes with blisters were noted on the palm and foot. 2-3 papules were present over the trunk region and knee as well. Oral examination revealed multiple reddish macules and sores on the roof of the hard palate and tongue.

Clinically, all the cases were diagnosed as hand, foot and mouth disease. The patients were advised to take plenty of fluids and were treated symptomatically. Topical oral preparation like Daktarine oral gel and somogel were also advised for intraoral application. Antihistamine syrup was advised to reduce itching and calamine lotion for topical application. The patients were followed up for 3 months and no recurrence was noted.

CONCLUSIONS:

Presentation of the cases may be confused with Chickenpox and urticarial rashes. The typical lesions on palms and soles with mouth ulcers and fever guide the physician towards HFMD. Though course of the disease is self-limiting and nonfatal, there are some reported cases with complications. All dentists, pediatricians and dermatologists must be made aware of the clinical features, possible complications and preventive strategies.

RECOMMENDATIONS:

Early identification and management, consuming plenty of liquids,implementation of proper sanitation practices, promoting hand washing habits, proper washing of used utensilsand availability of safe drinking water and limiting close contact with affected childrenare recommended. Avoiding school or other outdoor joint activities during illness is a very simple and effective strategy to prevent further transmission of the disease.

LIMITATION:

Due to non-availability of laboratory diagnostic facility in Pakistan, laboratory confirmation was not possible.

We have no conflict of interest to declare.

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