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Variable Clinical Profile of HFMD like Illness in Few Children

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Abstract

Hand Foot Mouth Disease (HFMD) is a distinctive rash syndrome caused by Non-Polio Enterovirus, several strains of Coxsackie virus and few strains of ECHO (Enteric Cytopathic Human Orphan) virus.

ABBREVIATIONS

HFMD: Hand Foot Mouth Disease

INTRODUCTION

HFMD is usually a mild illness with or without low grade fever. The oropharynx will be inflamed and scattered vesicles on the tongue, buccal mucosa, posterior pharynx, palate, gingival and/or lips. These may be ulcerated and present as shallow lesions. Maculopapular, vesicular and/or pustular lesions on the hands and fingers, feet, buttocks and groin will be observed. Hand lesions will be more. Skin lesions over hands and feet can be tender vesicles that resolve in about one week. Brain stem encephalomyelitis, myocarditis, pericarditis, shock, pulmonary hemorrhage neurogenic edema are possible complications which can lead to death [1].

The first report of HFMD in India was from Calicut in 2003, published in 2005 [2].

The clinical profile of HFMD like illness in children who presented to the office of the author was published in 2017 [3].

METHODOLOGY

Few unique features found in sporadic cases of HFMD like illness were analysed and reported here. The term HFMD like illness was used since the report is based on clinical diagnosis.

CASE PRESENTATION

Case 1

Four months old female child weighing 6Kg with Z score of -1 [4], on exclusive breast milk had watery loose stools and fever for 2 days. Based on the Z score it was well nourished. Mother reported incessant cry for about 24 hours on day 3, skin and oral lesions manifested on days 4 and 5 respectively. Lesions were on the dorsum of the hands, palms and soles. After the exanthem, desquamation of skin was noticed after 2 weeks. Cry and fever decreased.

Case 2

19 months old male child weighing 8 kg had febrile respiratory illness for 3 days followed by skin lesions and few oral lesions noticed on days 4 and 6. Skin lesions were scattered on soles, palms and very few on both buttocks.

This child was undernourished with Z score -2, indicating moderate malnourishment.

Case 3

19 months old male child weighing 7.5 kg with Z score of <-3 (indicating severe malnourishment) had intermittent fever for 1week followed by few skin and oral lesions lasting for 3 days. Few skin lesions were found over the dorsum of feet, hands and buttocks. Excessive itching which lasted for about ten days was noted.

Case 4

4 Years old male weighing 12 kg, with Z score of -2 (moderate malnourishment), had mild fever for 1-2 days, developed extensive skin lesions over soles, less of lesions over palms and minimal mouth lesions which resolved in 7-8 days. There were more of skin lesions over both soles and few on the palms.

Case 5

2 1/2 years old male weighing 10 kg, Z score indicating moderate malnourishment, refused to walk for 2 days because of pain over soles. Erythema of both soles was noticed. After 2 days dense vesicular skin lesions manifested on both soles. Fever, rhinorrhea and few oral and hand lesions were noticed. Dense skin lesions over soles and few on palms were noted. Total healing of skin lesions took about 6 weeks.

Virological confirmation could not be done in these children

for want of facilities. All these 5 children were symptomatically treated and were not hospitalised. No systemic complications were observed.

DISCUSSION

All these reported five children had unique features. Case 1 child was 4 months old. The age is less common in this region though Kar et al. [5], from Odisha reported HFMD in a 4 months old infant. This child was exclusively breastfed and well nourished. Probably breast milk could not offer immunity against the HFMD organisms, as is the case with Polio and Rota Virus.

The preceding diarrhea could be attributed to the enteral infection. It can be hypothesized that excess cry can be because of tenderness even before the onset of exanthem which was the presenting symptom in case 5. Total healing was prolonged in cases 1, 4 and 5.

All the reported 5 cases for more of skin lesions over soles than in hands. Usually hand lesions will be predominant [1]. Case 5 had dense lesions over the sole.

Except in case 1, all the other 4 children were undernourished, which is probably a risk factor for any infection owing to the compromised immunity.

In case 3, excess itching was noticed for the first 10 days, i.e. during 7 days of exanthem and for 3 days after healing started. Itching was present but less till complete desquamation which took another one week. Earlier reports have observed itching in 19.2 % [3], 30.7 % [5] and 44.7% [6] of the cases.

Though the standard description of HFMD [1] quotes that the disease can be with or without mild fever, all the reported cases had moderate fever ranging from 100 to 102.5°F (37.7-39.2°C). Case 3 had intermittent fever for 1 week, prior to skin lesions; case 5 had mild fever after exanthem. Prolonged healing time was noticed in case 1 and case 5.

CONCLUSION

The variable clinical profile may be due to:

1. Different strains of different viruses
2. Viral load
3. Modified immune response in undernourished hosts
4. Innate poor immune response in young infants (Case 1)
5. Sporadic nature of these cases
6. Tropical climate of this study area might have influenced the virulence and/or response of the host.

These findings may be the tip of the iceberg. Wider and deeper analysis with more study population in epidemiological backdrop is mandatory. High index of suspicion is essential for early clinical diagnosis of this entity since few may go in for systemic complications.

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