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Research Article

Case series of hand foot mouth disease in children

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ABSTRACT

Hand foot mouth disease (HFMD) is a highly contagious disease caused by human enteroviruses. A total of 27 cases of age group 8 months to 10 years, presented with symptoms like skin rash, mouth ulcers, sore throat, fever, cough, abdominal pain and diarrhea. The exanthemas were erythematous maculopapular with few vesicles and enanthems in buccal mucosa, palate and tongue. The treatment of this disease is symptomatic and proper personal hygiene. It is important to establish right diagnosis to avoid epidemics.

Keywords: HFMD, Exanthema, Enanthema

INTRODUCTION

Hand Foot Mouth Disease (HFMD) is a highly infectious viral illness with a distinct clinical presentation. It is caused by human enterovirus, usually coxsackie viruses type A16.[1-5] The other types of coxsackie virus type A5, A10, B2, B5 and other enteroviruses are less common cause of the illness.[6-9] This disease has a characteristic clinical feature which is combination of exanthem and enanthem with clinical symptoms like low grade fever, cough, sore throat, abdominal pain, diarrhea and malaise.[10-12]

METHODS

A total of 27 cases were noticed during the period October 2013 to November 2013.

This report describes mainly the clinical features and clinical diagnosis of the hand foot mouth disease.

RESULTS

A total of 27 cases were seen in our hospital during October 2013 to November 2013. All the cases were in children aged between 8 months to 10 years. Among the 27 cases 15 were male and 12 were female (Table 1).

Table 1: Age and sex distribution.

Age group	Male	Female	Total number	Total %
8 months - 1 year	3	5	8	29.7
1 year - 5 year	8	7	15	55.5
5 year - 10 year	4	0	4	14.8
Total	15	12	27	100

The main presenting symptoms of the disease were rash (100%), sore throat (66.6%), low grade fever (85.1%), cough (66.6%), abdominal pain (25.9%), diarrhea (7.4%) and mouth ulcers (92.5%). The skin lesions were found mainly on the hand, palms, buttock, legs and soles in almost all the cases (Figure 1). The skin lesions were erythematous maculopapular and in few cases vesicles also present. Mouth ulcers were in palate, buccal mucosa and tongue (Figure 2).

The illness lasted for 6 to 7 days in all the cases. In 3 cases they had contact history of HFMD mainly through the siblings (Table 2).

Table 2: Clinical features of HFMD.

Symptoms	Number	Percentage (%)
Skin rash	27	100
Mouth ulcers	25	92.5
Sore throat	18	66.6
Fever	23	85.1
Cough	18	66.6
Abdominal pain	7	25.9
Diarrhea	2	7.4
Sign		
Skin lesions		
Hand	22	81.5
Palm	25	92.5
Buttock	20	74
Thighs/legs	18	66.6
Sole	25	92.5
Mouth lesions		
Palate	8	29.6
Buccal mucosa	5	18.6
Tongue	14	51.8
Type of skin lesions		
Maculopapular	25	92.6
Vesicles	2	7.4
Both	19	70.3

Based on the history and clinical features, clinical diagnosis of hand foot mouth disease was arrived in these children. All these children were treated accordingly to their symptoms. Potential necessary of personal hygiene was advised to these children as well as to the parents. They were followed up and healing of all skin lesions was noticed within 6 to 7 days of life and with disappearance of the symptoms.

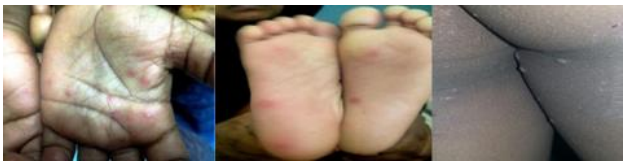

Figure 1: Maculopapular rash in palms, soles and buttock.

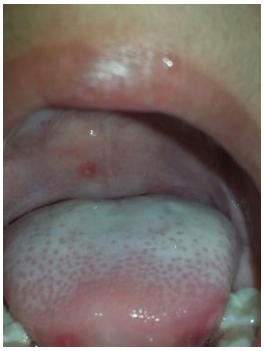

Figure 2: Lesion in the hard palate.

DISCUSSION

HFMD was first described by Robinson and Rhodes in 1957 from an outbreak in Toranto, affecting 60 patients from 27 families.[13] A outbreak occurred in India in 2007, where about 8 cases of HFMD in and around Kolkata were reported.[13] HFMD is caused by highly contagious viruses of the picornaviridae family. Humans are the only natural host of coxsackie virus. During epidemics, the virus is spread by horizontal transmission from child to child. Transmission occurs by means of direct contact with nasal or oral secretions, fecal material or aerosolized droplets in a fecal oral route or oral - oral route. Initial viral implantation in the buccal and ileal mucosa, is followed by spread to lymphnodes within 24 hours and with the spread to the oral mucosa and skin. By day 7, neutralizing antibody levels increase and the virus is eliminated.[14]

The age of distribution of the reported cases in between 6 months to 5 years.[15] In our cases children till 10 years of age were affected. HFMD is more severe in infants and children than adults; this disease has a mild course. Symptoms such as malaise, low grade fever, anorexia, diarrhea, abdominal pain, cough, coryza can occur. Oral lesions begin as erythematous macules that evolve into 2-3 mm vesicles on an erythematous base. The vesicles may involve the palate, buccal mucosa, gingiva and tongue.[15] Tongue involvement in 44% cases has been reported.[15] In our cases also the oral lesions were more in tongue than in buccal mucosa and palate.

Cutaneous lesion typically in the hands, feet and buttock are involved. The hands are involved more than the feet. Each lesion begins as a 2-10 mm erythematous macule, papule and a vesicle develops and these lesion resolve in 3 to7 days as a result of fluid resorption.

In our cases there were maculopapular erythematous rash, less commonly vesicles. These lesions involving more in hands, buttocks, palms and soles less in thighs and legs. And all the lesions were resolved in a week.

The treatment is mainly symptomatic. Similarly our cases were also treated symptomatically, and these children and their parents was advised personal hygiene to prevent the spread to other children and also the family members.

This paper highlights mainly the clinical features and to clinically diagnose the cases of HFMD. Mainly to treat the patients symptomatically with proper counseling of personal hygiene, and this is necessary to reduce the potential spread of disease.

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Ethical approval: Not required

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