

HAND-FOOT AND MOUTH DISEASE: AN AYURVEDIC PERSPECTIVE**Sudha Singh¹, Deepak S Khawale²**¹Associate professor, Department of Balroga ,C.A.R.C.Nigdi,PuneMaharastra, India²Associate professor, Department of Balroga,
Dr.D.Y.PatilAyurvedic College, Pune, Maharashtra, India**ABSTRACT**

It is a highly contagious viral illness primarily affecting children below 5 years. This disease was not there in India till 2003. The condition is characterized by a combination of exanthems and enanthems followed by one or more episode of fever. The disease affects more than one family member and often takes a toll of epidemic situation. The modern management offers only symptomatic relief along with antiviral medicines whose indications are limited to severe cases. So there is an urgent need of a safe and effective ayurvedic management to relieve the symptoms without any adverse effects.

Keywords-exanthem, enanthem, epidemic

INTRODUCTION

Hand, foot and mouth disease (HFMD) is a common viral illness of infants and children and is extremely uncommon in adults; however, still a possibility. Most adults have strong enough immune systems to defend the virus, but those with immune deficiencies are very susceptible. The age prevalence is commonly seen up to 5 years and rarely seen above age of 10¹.

It is caused by Enterovirus belonging to family picornaviridae including polio, coxsackie virus and enterovirus. The most common strains causing HFMD are Coxsackie A virus (CA16) and Enterovirus71 (EV71)².

It was first diagnosed in a child suffering from fever with rash in Toronto in 1957³. Reports from Asia-pacific region indicated occurrence of epidemics in 1997 (Sarawak)⁴, 1998 (Taiwan)⁵, 1999 (Perth)⁶ and 2000 (Singapore, Korea, Malaysia and Taiwan)⁷. This disease did not affect India till 2003,

when the first ever epidemic was observed in Kerala⁸.The others were reported from Nagpur (Maharashtra) in 2005-06⁹ and West Bengal in 2007¹⁰and from state of Orissa (presently Odisha) Bhubaneswar where total of 78 cases were recorded till November 6, 2009¹¹.The clinical presentation and demography of the affected population in the above outbreak are described herein.¹²

Clinically, the condition is characterized by a combination of exanthems and enanthems followed by one or more episode of fever, here exanthem means eruption of skin and enanthem means eruption of mucus membrane¹³.

It is very important to differentiate this disease to other similar viral diseases manifest in childhood age. Oral lesion in HFMD can be easily misdiagnosed as aphthous ulcer, chicken pox (varicella) or herpangina. HFMD is confirmed by the skin eruption

characteristically manifest on palm and sole.¹⁴

Now a day's all such similar infective disorder manifests in Pune, Maharashtra. The peak month for these types of infection there is Mid September to Mid November and February to March end.

DISEASE MANIFESTATION

1. Start with / without 1-2 episode of low grade fever.
2. Sore mouth and sore throat (painful ulcers on tongue, lips, buccalcavity , pharynx, palate)even child cannot swallow/drink and feels mostly irritable. Oral lesions begin as erythematous macule that evolves into 2-3mm vesicles on an erythematous base.
3. The painful pinkish vesicles are typically on palmer side of hands and sole side of feet is very characteristic in appearance.
4. In some cases small rashes with vesicles may erupt on all joints (knee, wrist, axilla) and diaper area with mild itching and pain.
5. Other symptoms-headache, loss of appetite.
6. It is self-limiting disease. Nearly all patients recover in 7 to 10 days without medical treatment.

Complication—It includes temporary loss of toe nail or finger nails 4 weeks after onset of disease. Rare complications include aseptic meningitis, polio like paralysis, myocarditis and respiratory distress syndrome.

After drying the eruption, Scaling persist up to 3-4 weeks and then disappear without any scar or discoloration in majority of cases.

Rarely secondary infection and impetigenization of the lesions observed in some cases.¹⁵

Every patient don't have similar type of manifestation .It may be according to their im-

munity because some patients have only eruption of palm and sole and no involvement of buccalmucosa.

In cases of complete eruption (enanthem and exanthem) some pediatricians of modern medicine prescribed anti-viral (e.g. Acyclovir) medicines along with antipyretics and topical soothing agents like calamine ,zinc oxide lotions on skin and viscous lidocaine or diphenylhydramine for painful oral ulcers . Antiviral drugs may reduce the pain of sores and fasten healing and decrease the viral spreading to other part of the body but has many adverse effect like nausea to dizziness, drowsiness, shaky movement of the body etc.^{16,17}

Control depends on hygienic measures such as hand washing to reduce the spread by the fecal-oral route. No vaccine is available against this disease.¹⁸

AYURVEDIC PERSPECTIVE-

According to Ayurveda we can explain it as vitiation of *rasa* and *Raktadhatus* with *Vata* and *Pitta* dominance. The *Srotas* affected are *Rasa* and *Raktavaha*. Eruption of skin and mucus membrane is due to involvement of *Rasa* and *Raktadhatus* and excessive pain in eruption is due to *Vata* and redness/erythema with fever is due to *Pitta*.¹⁹

We can explain the course of disease in terms of *dosha* predominance as follows-

Table-1

Course of disease	Dosha predominance	Dushya	Symptoms
Initial phase	Vata-pitta predominance	Rasa, Rakta,	Fever followed by sore mouth / V+Pmukhpak and eruption of skin mainly sole and palm
End of illness	Mainly Vata	MainlyRasa	Hardening of eruption and scaling of eruption

AYURVEDIC MANAGEMENT

In Ayurveda, herbsto pacify pitta, rakta and vata are madhur and tiktarasadravyas-like, Yastimadhu (*Glycerrhizaglabra*), Anantmool (*Hemidesmusindicus*), Shatavari (*Asparagusracemosus*), Nagarmotha (*Cyperusrotundus*), Guduchi (*Tinosporacordifolia*), Vasa (*Adhatodaindica*), Shirish (*Albizialebeck*) are useful in this disease have properties like deepan, pachan, jawaghna, raktaprasadan, vishagna, rasayana and rasadhathugataamapachanto relieve the symptoms of this disease.²⁰

Someparthivdravyalike Gairikchurna in along with cow ghee give quick relief in sore mouth and bhasmas like Prawalpisti, muktapisti, suvarnamakshikbhasma, godantibhasma and raupyabhasma help to normalize vata pitta dosha and relieve eruptions. Locally on skin eruptions shatadhautghrita, coconut oil and orally as well as locally mahatiktakghritahas been used in this disease.²¹

According to various ayurvedic texts the formulations indicated in mainly vatapit-taj/raktajmukhapakalike Sarivadigana, Padmakadigana, Pittanashakgana and Nyagrodhadi gana²² can be used in this disease as well as kalpas indicated in Masurika and Visphotachikitsa like khadiras-

tak, guduchyadi kwath, patoladi kwath and locally dashanglepa, gauradhyaghrita etc. can be used.^{23,24}

DISCUSSION

There are various viral infections manifesting in pediatric population. Now a day's increase in newer viral diseases because of migration of persons from one country to other as well as variation of Indian climate from previous. In modern medicine very limited options are available like analgesics, antipyretics and in severe illness antiviral drugs which has various side effects.

According to ayurveda, no disease can cross the presence of Tridosha. Any disease or dysfunction in the body itself is an indicator of these factors. So we can treat any disease after the evaluation of these factors with ayurvedic fundamentals.^{25,26}

In ayurvedic view the main Ritus in which the disease manifest are autumn pitta prakopkal and spring a kapha prakopkal. In these ritu-sayurvedic nidana (etiological factors) related to pitta-vata Prakopakaaharvihar and specific nidana for vitiation of rasa and raktava-hasrotas respectively atiguruatisheetasevan and atiusnavidaharvihar.²⁷ Many skin eruptive illness of any origin predominantly manifest in these ritus.

In present illness the line of treatment is *pit-ta Vatasha-mak,Raktaprasadak,Vishagna,Rasayana*(rejuvenator to increase immunity) and *Rasa, Raktadhatugataamapachak* etc.The overall effect of mentioned herbs and bhasmas are immuno-modulator and remission of skin and mucus membrane eruptions and other systemic symptoms and also help to reduce the duration and severity of illness without any side effect.

CONCLUSION

Here the disease manifestation is fever with eruption of skin on hand and feet and mucus membrane inside oral cavity which can be correlated with *Vata, Pitta* and *Rakta* involvement and can be treated accordingly. It can be concluded that ayurvedic medications offer a variety of herbs to relieve the symptoms of any kind of viral disease because these are acute in nature and there is always a need of some immunomodulators along with normalizing the vitiated *doshas*. There are various effective *kalpas* described in our classics for skin eruption and these should be tried for such acute diseases to give better results.

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