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Popular Article

## Tomato Flu and Its Prevention and Control

**Subhash Chand Meena, Surendra Singh Shekhawat and Neharika Saxsena**

Department of Veterinary Public Health & Epidemiology  
Post Graduate Institute of Veterinary Education & Research, Jaipur, Rajasthan-302021  
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### *Abstract*

The goal of this article is to present the most recent information about the "tomato flu" outbreak in India. A new disease recently sprung out in some regions of India. The illness had a rash that was primarily seen in children under the age of nine and was extremely contagious. It was called "tomato flu" because the rash was excruciatingly painful and the blisters were the size of tiny tomatoes. Tomato flu is considered a "Hand, Foot and Mouth disease". The two main viruses causing HFMD are human enterovirus 71 (EV-A71) and coxsackievirus A16 (CV-A16). In most situations, the clinical presentation is minimal. The infection is self-limiting and will go away on its own in 7–10 days. The therapy is generally composed of symptomatic, supportive care, isolation, and maintaining hygiene norms.

**Key words:** Hand foot and mouth disease, Blisters, Tomato flu, HFMD, Coxsackievirus A16.

### **Introduction**

An unknown viral organism that causes the infectious sickness known as tomato flu was discovered for the first time in Kerala, India, in May 2022. By August, over 100 young children in Kerala, Tamil Nadu, Odisha, and Haryana had been confirmed with tomato flu. The illness initially manifests as a reddish tiny blister that enlarges to mimic the shape of a tomato, hence the names "Tomato flu" and "Tomato fever. "The primary symptom of the sickness, tomato-shaped blisters all over the body. At initial stage the blister are red colored and small in size which then enlarge to resemble the shape of a tomato, led to the nickname "Tomato Flu." or Tomato fever. Children under

the age of five years are the biggest targets. Tomato flu is considered as “Hand, Foot, and Mouth disease”. In HFMD, coxsackievirus A16 infection causes only a mild form of the illness. Nearly all patients recover in roughly 7 to 10 days without medical intervention. The infectious virus, which is found in affected people's saliva, blister fluid, nose and throat secretions, and stool, spreads infection through direct contact.

### **Etiology**

The causative agent of HFMD belong to the enterovirus genus, such as polioviruses, coxsackie viruses, echo viruses, and other enteroviruses. Coxsackie virus A16 is the most frequent cause of HFMD. The virus belongs to the Picornaviridae family and the Human Enterovirus A (HEV-A) species of the Enterovirus genus. A single-stranded, positive sense, polyadenylated RNA virus with an icosahedral symmetry structure.

### **Epidemiology**

In Birmingham, the first case of HFMD was diagnosed in 1959. In May 6, 2022, the Kollam district of Kerala reported the first case of tomato flu; as of July 26, 2022, the local government hospitals had documented the infection in more than 82 children under the age of five. The first incidence of the tomato flu, which was recorded on May 6, 2022, was a four-year-old child from Aryankavu, a village close to the border between Kerala and Tamil Nadu.

### **Transmission**

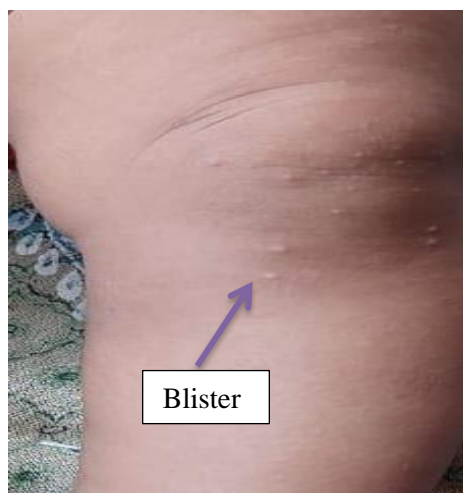
Human-to-human transmission of HFMD is possible through the fecal-oral route, direct contact, and respiratory droplets. Disease is transmitted through direct contact with the infectious virus, which is present in the saliva, blister fluid, nasal secretions, and stool of the infected person. The virus can also be spread by people's hands, fomites, and by contact with exposed surfaces. Fecal-oral transmission predominated for transmission of HFMD. It is important to consider that temperature and humidity may play a crucial role in HFMD transmission.

### **Clinical Sign**

The primary sign of this illness, tomato-shaped blisters on various body areas, is where the term "Tomato Flu" originates. The blisters initially appear as tiny red blisters that resemble tomatoes as they grow in size. The primary signs and symptoms of tomato flu in children include fever, rashes, and joint discomfort, which are typical of other viral illnesses. Skin irritation can result from rashes on the skin. As with other viral infections, weariness, nausea, vomiting, diarrhoea, fever, dehydration, joint swelling, body aches, and typical influenza-like symptoms are among the



symptoms. Fever, open sores in the mouth, and a skin rash are the features of HFMD. The first signs are a mild fever, loss of appetite, lethargy, and, in many cases, a sore throat. Small red spots start to appear one or two days after the fever starts, and they soon develop into blisters and finally ulcers. The tongue, gums, inside of the cheeks, palms, and soles are the typical sites for the sores. ‘Tomato flu’ caused by the CV-A16 virus is self-limiting and non-life threatening.



### Diagnosis

- On the basis of history
- Clinical sign
- Physical examination
- Samples from throat or stool may be sent to a laboratory to test
- Real Time PCR
- Viral isolation on monolayer of Vero Rhabdomyosarcoma and MRC 5

### Treatment

It is a self-limiting infection, which gets resolved on its own in 7-10 days.

- No specific drugs are available now to treat this virus.
- Symptomatic treatment
- Antipyretic
- Analgesic
- Fluid therapy
- Proper hygiene and sanitation
- Isolation of infected child

### Prevention and Control

- Avoid making contact with the sick person immediately.
- Isolation for 5-7 days.
- Drink more water, juices and liquid content
- Drink boiled water



- Do not touch the blisters
- Maintain personal hygiene
- Sterilize patients' cloths, utensils properly
- Maintain physically distance from suspected cases
- Take a nutrition-rich, balanced diet to boost immunity
- Take sufficient rest

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