

Differential Cytokine Profiles in Clinical Isolates of Various Causative Agents of Hand, Foot and Mouth Disease

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Background/Objective

Hand, foot and mouth disease (HFMD) is a common contagious viral disease resulting in fever, blisters on the hands and feet, and ulcers in the mouth. While HFMD is caused by multiple serotypes of viruses under the genus Enterovirus within the Picornaviridae family, HEV-A viruses Enterovirus 71 (EV71) and Coxsackievirus A16 (CA16) are considered the major etiological agents. As EV71 is implicated in death threatening conditions with neurological and/or cardiological complications, HFMD research mainly focus on this causative agent.

In recent years however, more non-HEV-A enteroviruses have been isolated from infected individuals, joining the legion of HEV-A viruses associated with HFMD. Of particular interest is CA6, which is reportedly associated with an atypical clinical presentation including onychomadesis, skin eruptions at unusual skin sites and desquamation of palms and soles. As this often results in misdiagnosis, it is imperative for HFMD research to consider this causative agent as well.

Method

The present study investigated the cytokine profiles of hospitalised HFMD patients, stratified by the type of causative clinical isolates found.

Result

Preliminary data suggested that overlapping as well as unique cytokine profiles exist among the different clinical isolates, which may help in HFMD diagnosis.

Conclusion

Accurate and timely diagnosis is crucial not only to allow for timely clinical interventions but also to disrupt transmission cycles and prevent major outbreaks.