Short Communication

Hand Foot Mouth Disease – Experience of epidemic in children in Lahore, Punjab, Pakistan

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Hand Foot Mouth Disease (HFMD) is a viral infection first described by Robinson et al in 1957 as an outbreak in Toronto. The infectious disease was characterized by vesicles inside the mouth and on the hands and feet and was found to have been caused by Coxsackievirus (CVA) 16.[1]

Individual cases and outbreaks of hand, foot, and mouth disease (HFMD) have been occurring around the world since 1997. Large outbreaks of HFMD associated with enterovirus 71 have been reported mostly in children in East and Southeast Asia. In these outbreaks, most children manifest typical symptoms of HFMD and recover without any complications. A small number of people with this disease, however, develop severe complications that require hospitalization and may even lead to death.[2] Some of the major causative agents are CVA16, CVA6 and CVA10, and Enteroviruses (EV71).[3]

The disease is associated with changes in climate, usually occurring in spring and summer, and spreads through infected droplets from those affected and contact with feces or contaminated surfaces. This disease possesses potential to spread rapidly in children attending day care or pre-school nurseries, constituting a commonly infected age group. Clinically, HFMD is characterized by erosive stomatitis that occurs with a vesicular and maculopapular rash which is frequently observed on the hands and feet.[2]

Sporadic cases of HFMD have been observed in clinical practice in Pakistan but an outbreak of the disease has not been reported before from this region. Pursuant to our observations during the period from winter 2016 to spring 2017, however, we report an outbreak of the disease in Lahore and central Punjab. The disease initially affected children belonging to a pre-school age group subsequently spread to younger children. The diagnosis was made on the basis of a characteristic clinical manifestation. Laboratory confirmation as to which particular virus was responsible for this outbreak was not possible due to lack of facilities for diagnosis. Although HFMD is more common in spring and summer, we observed this outbreak kick-off in winter. Cases of HFMD have also been reported from neighboring countries.[4]

Alongside this epidemic, we have seen four cases that, following a brief prodome of fever, have presented with sudden weakness and pain in legs (more so in calves) leading to difficulty in walking. In a country where polio is still endemic, stool specimen of all such cases of acute flaccid paralysis were investigated for Polio viruses and were found to be negative. However, CPK was very high (>2000 U/L). All patients showed functional improvement and were walking within two to three days. Subsequently the patient's CPK level also declined.

Diseases caused by Enterovirus and Coxsackievirus are common among children and young adults. A series of severe complications such as meningitis, encephalitis, acute flaccid paralysis, and myocarditis have been reported with Coxsackievirus infections. Acute viral myositis has been reported as a recognized complication of Enterovirus infection. Terlizzi V et al[5] published a case report of benign acute childhood myositis, and reviewed the literature. The common organism for acute myositis were Enterviruses, influenza A, B virus,adenovirus, respiratory syncytial virus, cytomegalovirus, herpes virus, Epstein–Barr virus, and mycoplasma pneumonia.[6]

Simultaneous outbreak of HFMD and occurrence of viral myositis and no report of neurological complications support that the current outbreak is probably due to Enterovirus 71 infection. CDC[2] has also reported large outbreaks of HFMD caused by Enterovirus 71. In countries where Polio is still endemic, viral myositis due to non-polio enteroviruses should be considered in differential diagnosis of acute flaccid paralysis.

To the best of our information, this is the first report of outbreak of hand foot mouth disease from Pakistan.

References

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