

**Clinical Features of Children Hospitalized with Chikungunya Virus Infection
during the Bangkok Outbreak in 2019**

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Background: A large Chikungunya outbreak in Bangkok, Thailand occurred in 2019 after a lapse of 60 years. Atypical and severe manifestations of Chikungunya virus (CHIKV) infection had been reported among children during this outbreak.

Objective: To describe the clinical manifestations of pediatric patients who hospitalized with CHIKV infection at Siriraj Hospital, Bangkok in 2019.

Material and Methods: A retrospective chart review of children hospitalized with confirmed-CHIKV infection between January 2019 and December 2019 was conducted. The data on clinical features, laboratory parameters, and outcomes were collected. The diagnosis of CHIKV infection was confirmed by positive reverse transcription–polymerase chain reaction (RT-PCR) or positive IgM antibody.

Results: Of the 31 patients, all except 1 were RT-PCR-confirmed cases of CHIKV infection. Of the 28 (90.3%) children with atypical manifestations, 4 were severe cases, and 2 were neonates with mother to child transmission. All patients had fever. Eighteen (58.1%) experienced musculoskeletal involvement: myalgia (41.9%), arthralgia (35.5%), arthritis (6.5%). Maculopapular rash was reported by 21 (67.7%). The most common atypical manifestations were neurological involvement 7 (22.6%): meningoencephalitis (16.1%), encephalopathy (6.5%), acute kidney injury 7 (22.6%), and bullous rash 6 (19.4%). All 4 children with severe form developed shock. Two cases of congenital CHIKV infection had meningoencephalitis and positive CHIKV RT-PCR in cerebrospinal fluid. Both of them developed oromotor dysfunction. No fatal case was reported.

Conclusion: During the CHIKV outbreak, children presented with fever, myalgia, arthralgia, skin rash, and particularly meningoencephalitis or encephalopathy should be suspected of atypical or severe manifestations of CHIKV infection.

Keywords: Chikungunya virus, pediatric, children, atypical, severe, Bangkok, Thailand