

Abstract

An Outbreak Investigation of Chikungunya Fever -District Tharparkar, Pakistan, August 2017

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Abstract

Background: On 8th August 2017 print media reported 49 cases of fever with severe joint pains from different villages of District Tharparkar. On the same day a team of FELTP fellows was deputed to investigate the situation.

Objective: The objectives of the investigation were to determine the extent of outbreak, evaluate the risk factors and suggest recommendation for control.

Methods: A descriptive followed by age and sex-matched case-control study was conducted in District Tharparkar in August 2017. Review of reported cases and active case finding was conducted. A case was defined as acute onset of fever (102°F) and severe arthralgia or arthritis not explained by other medical conditions, in a resident of District Tharparkar from 13 July to 27 August 2017. A structured questionnaire was used to collect the information. Blood samples were sent to National Institute of Health for confirmation RT-PCR. An entomological survey was conducted in the affected area. Frequencies were calculated, attack rates computed, and multivariate analysis undertaken at 95% confidence interval and a 5% margin of error.

Results: A total of 204 cases were identified, 155 through active case search. Mean age was 25.5 years (range 01 month - 80 years) with a female preponderance (n=112; attack rate (AR) 54%). The overall AR was 26.7/1000, with 20-29 years being the most severely affected age group (AR 33/1000). Presence of uncovered water containers was significantly associated with disease (OR=10.4, 95% CI= 6.54-16.6). Use of bed nets had a protective effect. Out of 48 samples sent, 34 were positive on RT-PCR. Entomological Survey revealed house index 79.3%, container index 40.6% and breteau index 182%.

Conclusions: Presence of uncovered water containers in the house were potential breeding sites for the vector and was the most probable cause of the outbreak. Indoor residual spray followed by fogging and community awareness were conducted.

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