Abstract

Outbreak Investigation of Dengue Fever in Water Scarce District Tharparkar of Pakistan, 2016

Sandeep Mehraj; N Masood

Corresponding Author:
Sandeep Mehraj

Abstract

Background: On 8th December 2016, 43 cases of dengue fever were reported from Tharparkar to Director General Health Office. The very next day FELTP fellows were assigned to investigate the outbreak.

Objective: Objectives were to assess the magnitude, evaluate the risk factors and recommend control measures.

Methods: Review of hospital records and active case finding was done. A descriptive followed by a case control study was conducted in December 2016. A case was defined as acute fever more than 102°F lasting >3 days, plus a positive NS-1 test in a resident of Tharparkar during September to December 2016. During entomological survey objects containing water were sampled and investigated for presence of larvae or pupa. The collected vectors were examined for species identification.

Results: A total of 254 cases were identified (211 by active case finding) with 73% males. Overall attack rate (AR) was 0.02 with 10-14 years being the most affected age group (AR=0.03). Out of 254 cases, 79%(n=201) had indoor water receptacles (OR 32, CI 19.6-54 with *P*<0.00), 61% (n=155) had potted plants inside the house (OR 8, CI 5-13, p value < 0.00), and 46% (n=118) had outdoor water receptacles (OR 3, CI 2-4 with p value < 0.00) whereas intact window nets 52% of cases (n=132) (OR 0.44, CI 0.02-0.08, P value < 0.00) were found protective against getting the dengue infection. Total 2616 Aedes larvae-(58.3 per dip) and 423 pupae-(8 per dip) were collected by 320 dips. Among 152 houses 182 breeding sites were identified. Adult Aedes were found in 12 of 230 rooms.

Conclusions: The outbreak was likely caused by presence of vector breeding sites inside and outside the house. On the recommendation of the study, health authorities initiated health awareness sessions and promoted mechanical control of breeding sites as well as use of windows net.

(iproc 2018;4(1):e10633) doi: 10.2196/10633

Edited by Y Khader; this is a non–peer-reviewed article. Submitted 29.03.18; accepted 29.03.18; published 29.03.18.

Please cite as:
Mehraj S, Masood N
Outbreak Investigation of Dengue Fever in Water Scarce District Tharparkar of Pakistan, 2016
iproc 2018;4(1):e10633
URL: http://www.iproc.org/2018/1/e10633/
doi: 10.2196/10633
PMID: