

Abstract

Outbreak Investigation on Acute Watery Diarrhea in Village Mir Khan Otho, District Shaheed Benazirabad, Sindh Pakistan, 2017

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Abstract

Background: On 9th July 2017, media reported eight cases of acute watery diarrhea and abdominal pain in village Mir Khan Otho, District Shaheed Benazirabad to the DG Health Office Sindh in Hyderabad. On 10th July 2017 a team of FELTP fellows was deputed to affected village.

Objective: To confirm the outbreak, estimate the magnitude, evaluate risk factors and make recommendations.

Methods: Age and sex-matched case-control study was carried out. Active case finding was done. A case was defined as sudden onset of acute watery diarrhea (≥3 loose motions within 24 hours) with or without vomiting, fever or abdominal pain in a resident of Village Mir Khan Otho, between 2nd and 20th July 2017. A structured questionnaire was used to collect data. Frequencies and attack rates were calculated and bivariate analysis was conducted. Three stool samples were sent to People University of Medical & Health Sciences, Nawabshah for microbiological analysis.

Results: A total of 30 cases were identified (22 through active case finding) and n=16 (53.7%) were females. Mean age was 25.3 years (range: 1-50 years). Overall attack rate was 23%. People aged 21-30 years were the most affected (n=10; AR 43.5%). Apart from diarrhea, abdominal cramps (n=28; 93%) was the most common symptom. On bivariate analysis, consumption of water from the hand-pump near the swamp was significantly associated with the disease (OR=8.4, 95% CI: 3.1-22.7) while frequent hand washing had a protective effect (OR=0.3, 95% CI: 0.16-0.59). *Vibrio cholerae* was detected in 2 stool samples. A swamp was created near the hand pump due to recent rains.

Conclusions: The most probable cause of outbreak was contamination of hand-pump by swamp water. Hand-Pump was removed thereby culminating the outbreak. ORS and chlorine tablets were distributed and health education sessions on personal hygiene and treatment of drinking water was imparted to the community.

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