

Abstract

Cholera Outbreak Investigation in Sawan Area, Shuaub District, Sana'a Capital City, Yemen, October 2016

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Abstract

Background: Diarrheal diseases are the second leading cause of death among children <5, 1 in 9 children die from diarrhea infection worldwide. The majority (88%) of these deaths are associated with unsafe water, inappropriate sanitation and lack of hygiene. *Vibrio Cholerae* bacterium can cause extremely virulent diarrhea. On October 2016 an outbreak of watery diarrhea occurred among a family in Al-Nasser St. Sawan area, Shuaub district, Sana'a capital city, Yemen.

Objective: An outbreak investigation was done to confirm the outbreak, to identify the source, risk factors and recommend control measures.

Methods: A descriptive and analytical studies were conducted. Active search of cases and control was performed. WHO case definition of cholera during epidemic was adopted. Stool samples were taken and sent to the public health central lab. for confirmation. The data was entered and analyzed by Epi Info 7.2 and Excel sheet were performed. Chi square and odds ratio were calculated.

Results: Out of 28 cases, 15 (54%) were females. The index case, a 65 years-old female, was identified on October 3rd. The peak of cases was on October 8th, 2016 (46%). The attack rate was 3/1000 population with no case fatality. Children < 5 (24%) and those 5-10 years (24%) were mostly affected. Out of 18 stool samples, 11 *Vibrio cholera* serotype 01 Eltor-ogawa was isolated (61%). The identified risk factors were: untreated water OR=10.7, (CI: 3.95-29.1) grape OR=4 (CI: 1.5-10.8), and porridge OR=3.1 (CI: 1.4-7.5).

Conclusions: Cholera outbreak was confirmed. Most cases were children up to ten years old. There was association between drinking water, eating raw vegetables and cholera infection. Boiling or chlorination of water and hand washing were recommended to control the outbreak

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