

Investigating a Community-Wide Outbreak of Hepatitis A in India

<https://www.researchgate.net/publication/263097091>

DOI: 10.4103/0974-777X.132040 · Source: PubMed

Cited in:

Journal of global infectious diseases 6(2):59-64, 2014

Investigating a Community-Wide Outbreak of Hepatitis A in India

Rakesh P¹, Sherin D¹, Sankar H¹, Shaji M¹, Subhagan S¹, Salila S¹.

¹ District Surveillance Unit, Integrated Disease Surveillance Project, District Medical Office, Kollam, Kerala, India.

Abstract

Background: There was an outbreak of acute hepatitis in Mylapore village, Kollam district, Kerala, southern India during February to June 2013. An outbreak investigation was initiated with the objective of describing the epidemiological features of the hepatitis outbreak.

Materials and methods: House-to-house visits were undertaken to identify symptomatic cases. The outbreak was described in terms of person, place and time. Hypothesis was generated based on findings from descriptive study, laboratory investigation of water samples, and environmental observations. A case-control study was designed to test the hypothesis. Chi-square test, univariate analysis, and logistic regression to identify the risk factors associated with hepatitis A infection were done.

Results: Line list generated consisted of 45 cases. Attack rate was the highest among the age group 15-24 years (4.6%) followed by 5-14 years (3.1%). The geographical distribution of the cases suggested a clustering around the water supply through the pipeline and epidemic curve showed a sharp rise in cases suggestive of a common source outbreak. Water samples collected from pipeline showed evidence of fecal contamination and absence of residual chlorine. In the case-control study, having consumed water from the pipeline (odds ratio: 9.01 [95% confidence interval: 2.16-37.61]) was associated with the hepatitis A cases.

Conclusion: The time frame of disease occurrence, environmental observations, anecdotal evidences, laboratory results and results of the analytical study indicated the possibility of occurrence of hepatitis A outbreak as a result of pipe water contamination supplied from a bore well. The study warrants establishment of an efficient water quality surveillance system.

Keywords: Hepatitis A; Outbreak investigation; Vaccination; Water contamination; Water supply

Reference: B N Tandon, B. M. Gandhi, Y. K. Joshi Etiological spectrum of viral hepatitis and prevalence of hepatitis A and B virus infection in North India. Bulletin of the World Health Organisation 62(1):67-73,1984