Abstract

Chickenpox Outbreak Investigation in Assabain District, Sana'a City, Yemen, January to February 2019

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Abstract

Background: Varicella zoster virus (VZV) causes chickenpox. The epidemiological profile of chickenpox varies considerably across countries, health care systems, and immunization policies. In Yemen, chickenpox remains an important public health issue and outbreaks are not uncommon since vaccination is not universal. On February 23, 2019, a medical doctor from the Al Kafji area of the Assabain district notified the Ministry of Public Health and Population of a chickenpox infection among his family members and neighbors.

Objective: The aim of this study was to confirm the existence of a chickenpox outbreak, describe the epidemiological characteristics of the outbreak, and recommend prevention and control measures.

Methods: A door-to-door search was performed for case finding and line listing with detailed epidemiological, clinical, and vaccination history collected. Four blood samples were collected and sent for laboratory confirmation by enzyme-linked immunosorbent assay. Data were analyzed with Epi info 7.2.

Results: A total of 26 cases met the case definition. The outbreak started on January 19, 2019, at one house and was then transmitted to the 2nd and 3rd neighboring houses. The Epi curve showed three peaks, with one peak for each affected house. The index case was an 11-year-old male. The overall attack rate was 34% and the highest attack rate of 56% was found in the 3rd house. More than half (58%) of cases were females and 46% were found in children in the age group of 10-14 years. All cases included symptoms of a rash with itching, 46% of cases had vesicular lesions, and 42% had <50 lesions. Overall, 8% of the cases had complications (ie, pneumonia). Approximately 25% of samples were IgM-positive. All cases were in unvaccinated individuals.

Conclusions: A chickenpox outbreak in the Al Kafji area of the Assabain district was confirmed. Females were more affected than males. Introducing the chickenpox vaccine as part of routine immunizations, and increasing community awareness about the mode of transmission and control measures for prevention are recommended.

(iproc 2022;8(1):e36598) doi: 10.2196/36598

KEYWORDS

Yemen; Sana'a; vaccine; outbreak

Multimedia Appendix 1

Chickenpox outbreak investigation e-poster.
[PDF File (Adobe PDF File), 383 KB-Multimedia Appendix 1]

Multimedia Appendix 2

Final report of the epidemiological investigation of chickenpox cases in Al-Khafji area in Al-Sabeen district in Sana'a city, January to February 2012.
[PDF File (Adobe PDF File), 1893 KB-Multimedia Appendix 2]

Edited by Y Khader; this is a non–peer-reviewed article. Submitted 18.01.22; accepted 19.01.22; published 24.02.22.

Please cite as:
Al-Tbali J, Anam L, Al-Jamrah KM, Abdul Moaen F
Chickenpox Outbreak Investigation in Assabain District, Sana'a City, Yemen, January to February 2019
iproc 2022;8(1):e36598
URL: https://www.iproc.org/2022/1/e36598
doi: 10.2196/36598
PMID: