INVESTIGATION OF DYSENTERY OUTBREAK AND ITS CAUSES, JIMMA CITY, SOUTHWEST ETHIOPIA

Wondwossen Birke Eshete, *Jimma University, Ethiopia*
Fessehaye Alemseged, *Jimma University, Ethiopia*
Alemshet Yami, *Jimma University, Ethiopia*
Zewdineh S/Mariam, *Jimma University, Ethiopia*
Kenate Worku, *Jimma University, Ethiopia*

Background and Aims: Although bloody dysentery commonly caused by Shigella is wide spread globally and occurs in outbreaks, epidemiological studies regarding shigellosis are rare in Ethiopia in general and none for Jimma City. Investigation team aimed to confirm, control and prevent further spread of suspected dysentery epidemic was formed after several cases visited Jimma University Specialized Hospital and private clinics in the city on 12th December 2008.
Methods: A data collection format containing address, demographic variables, risk factors and laboratory findings was prepared and distributed to all health facilities in Jimma City. Stool samples were collected from suspected cases and cultured to identify the causative organism and determine its antimicrobial susceptibility. Inspection of facilities and collection of water samples for bacteriological analyses was done from suspected sources. Data was analyzed using SPSS version 16 and results were presented in tables and figures.
Results: A total of 566 cases were seen in different health facilities in Jimma City in a period 29 days. Out of this, 299 (52.8%) were Jimma University students and 56 (11.7%) were residents of Jimma. Shigella flexinneri was identified from some of the stool specimens and was sensitive to most antimicrobial agents. There was a sudden increase in the number of cases starting from December 9, 2008 with a peak (161 cases) on December 12, 2008. The epidemic curve then fell down slowly with one small peak during the decline. 344 (60.8%) of the cases reported that they had consumed food prepared by Mars food factory located in the town.
Conclusions: There was dysentery epidemic from December 12-22, 2008 due to Shigella flexinneri most likely caused by food contamination at Mars food factory. To prevent future occurrence, regular health education and screening of food handlers with strong supervision of food establishments should be undertaken.
References:
Genobile D, Gaston J, Tallis GF, Gregory JE, Griffith JM, Valcanis M et al (2004). An outbreak of shigellosis in a child care centre. Commun Dis Intel ;28 (2)

Malakooti M, Alaii J, Shanks D and Phillips-Howard P (1997). Epidemic dysentery in western Kenya. Transactions of the Royal Society of Tropical Medicine and Hygiene; 91(5): 541-543