

doi:10.1016/j.ijid.2008.05.1183

69.003

A Large Outbreak of Water-Borne Typhoid Fever Attributed to Contaminated Well in a Coastal City, China

H. Lin

*Taizhou Municipal Center for Disease Control, Taizhou, China***Keywords:** Typhoid fever; Outbreak; Waterborne; Field epidemiology

Background: On October 15, 2006, the China information system for disease control and prevention revealed typhoid fever (TF) cases increasing greatly from October 7, comparing with the same period of the previous year, in a coastal city, P.R. China.

Objective: To identify its epidemiological cause, and develop its control measures.

Methods: TF case was defined as any case involving onset of fever between October 7 and December 15, 2006, plus the following: high fever ($>38.5^{\circ}\text{C}$), headache, malaise, intestinal hemorrhaging, myalgia, or rose-colored spots on the skin, and with the laboratory result of the decreasing Eosinophil cell or Widal test (+) in Jiaojiang district. The first 25 cases from October 7 and 100 controls randomly chosen from neighborhood of each case, age referring to +5 year old, were selected to carry out a case-control study, through questionnaire. Well water was randomly selected to detect the total bacteria, Coliform group. The chi-square test and non-conditional logistic regression analysis was used for statistical analysis. Statistical significance was assessed by the two-sided test with the test level equaling 0.05.

Results: Totally 58 typhoid cases, including 29 confirmed and 29 probable cases were identified between October 7 and December 15, 2006. The cases were mainly non-residents. Through non-conditional logistic regression analysis, the result showed that mode to use well water (Odds Ratio [OR]=5.71, 95% Confidence interval [95% CI]=2.23–14.59) and eat outside (OR=8.18, 95% CI=1.51–44.26, AR=0.27) was the main causation of this outbreak. In addition, through chi-square test, the result also shows that Xiyama market (OR=5.46, 95% CI=1.61–20.37, AR=0.23), cooked food taking (OR=4.13, 95% CI=1.44–11.92, AR=0.27) may also be the suspected risk factors of this outbreak. The number of total bacteria and Coliform group in well water both far outnumber the national drinking water standards. Further more, through field investigation, a public toilet was found 5 meters far from a well in the Xiyama market.

Conclusion: This TF outbreak was mainly caused by the inappropriate manner to use contaminated well water system, probably by septic tank seepage into storage well and unhealthy food habits. The epidemic was controlled by the effective measures.

doi:10.1016/j.ijid.2008.05.1184

Epidemiological Risk Factors of Urban Leptospirosis in North Chennai (Tamil Nadu) - A South India Study

N. Loganathan*, S. Shivakumar

Govt. Stanley Medical College & Hospital, Chennai, India

Background: Leptospirosis is under diagnosed and under reported in India due to lack of awareness of the disease and lack of appropriate laboratory diagnostic facilities in most parts of the country. Out of 28 States and 7 Union Territories in India, leptospirosis is endemic in 5 States [Tamil Nadu, Kerala, Gujarat, Karnataka and Maharashtra] and in one Union Territory, Andaman and Nicobar Islands. Chennai (formerly Madras) is an important coastal metropolis in South India and has a land area of 172 kilometersquare with a population around 6 million. The average yearly rainfall is about 1500 mm, with most rainfall coming from North East Monsoon (September - December). This study was undertaken to study the epidemiological profile of urban leptospirosis in North Chennai.

Patients and methods: Patients with fever admitted in Government Stanley Medical College and Hospital, tested positive for leptospirosis utilizing Macroscopic Slide Agglutination Test (MSAT) titers of 2+ and above with Modified Faine's score of >25 [Clinical (A) + Environmental (B) + Laboratory (C)] were taken up for study [confirmed by Microscopic Agglutination Test (MAT)]. These patients were evaluated for epidemiological risk factors as shown in Table below in addition to relevant clinical and lab profile. Other causes of fever were excluded with relevant investigations. This prospective study was undertaken from February 2006 to May 2007.

Results: 90 patients were analyzed. Males - 56 (62.2%); Females - 34 (37.7%) Age range: 13–74 years, Mean Age: 37.5 years.

All cases came from North Chennai, where majority of lower socio economic population reside. There were 86.6% outdoor manual workers, 7.7% housewives & 5.5% were students. 51% cases occurred between September to December. Contact with contaminated environment contributed to cases in other months. The epidemiological profile of our study group was shown in Table. The important factors in the contact with contaminated environment were, poor sanitation: 95.5%; walking barefoot: 85.5%; poor drainage facilities: 78.8% and contact with rodents in 33.3% cases.

Fever, Headache, Myalgia were the common presenting features and jaundice (23.3%), renal failure (16.6%) were the important complications noted. Mild cases were treated with oral Doxycycline and severe cases (with organ dysfunctions) with parenteral penicillin. One patient was dialyzed. There were no mortality.

Conclusion: This study revealed that,

- Poor sanitation, walking bare foot, inadequate drainage facilities were the important epidemiological risk factors due to contaminated environment in acquiring leptospirosis in North Chennai.

- (b) Rodents were the main animal source of contact.
 (c) Rainfall was another important epidemiological risk factor.

doi:10.1016/j.ijid.2008.05.1185

69.005

A Seroepidemiologic Survey of Brucellosis in Human and Animals in Birjand, East of Iran

S. Bokaie^{1,*}, L. Sharifi², H. Alizadeh³

¹ *Veterinary Medicine Faculty of Tehran University, Tehran, Iran (Islamic Republic of)*

² *Immunology, Asthma and Allergy Research Institute, Tehran University of Medical Sciences, Tehran, Iran (Islamic Republic of)*

³ *Faculty of Veterinary, Garmsar Branch, Islamic Azad university, Tehran, Iran (Islamic Republic of)*

Keywords: Brucellosis; Birjand; Seroprevalence

Background and Objectives: Brucellosis is a major bacterial zoonosis of global importance. In Iran human brucellosis is endemic in all parts of the country and Brucellosis is a significant health problem in Iran. The aims of this study were determination of seroprevalence of brucellosis in sheep, goat, cattle and human and evaluate the correlation between human and animal brucellosis in Birjand, a sub-tropical city in east of Iran.

Methods: Among 472106 patients referred to hygiene centers and 12113 cattle and 7199 sheep and goat sera samples which tested by veterinary organization of South Khorasan province, Iran during 2002-2006, statistical analysis was performed to show the prevalence rate of brucellosis. Pearson correlation coefficient was used to evaluate the correlation between animal and human brucellosis.

Results: Results shows that the prevalence rate of brucellosis during 2002–2006 in Human was 37 per 100,000, in sheep and goat were 340 per 10,000, and in cattle were 56 per 10000. Statistical analysis showed that Pearson correlation coefficient of cattle and sheep brucellosis ($r=+0.746$), cattle and human ($r=+0.228$), human and sheep ($r=+0.304$) are positive but incomplete

Conclusion: According to the results of this study prevalence of brucellosis in the Birjand population was much lower than in the reports of other countries of the region. Higher correlation between sheep and human brucellosis is due to consumption of sheep raw milk, cheese and meat or direct contact with sheep in Birjand.

doi:10.1016/j.ijid.2008.05.1186

69.006

Epidemiology and clinical predictors of GABHS among students in Alexandria, Egypt

M. Abdel Moneim*, M. Hashish

Alexandria University, Alexandria, Egypt

Pharyngotonsillitis in one of the most common respiratory diseases in the community among childhood. Nearly 28% - 40% are estimated to be caused by GABHS which is considered the most important etiological pathogen in the terms of complications.

Objectives: To study the epidemiology and to determine the clinical predictors of GABHS pharyngitis.

Methods: A cross-sectional study was conducted over a period of one year where primary and preparatory school children (600) attending school health insurance clinics and suffering from pharyngotonsillitis were screened. The data collection tools included questionnaire interview inquiring about demographic data, clinical data and a throat swab was taken for culture on a 5% sheep blood agar plate then subjected to Bacitracin susceptibility. Chi square tests were used, Logistic regression analysis was performed to predict the significant variables that were significantly associated with GABHS.

Results: the overall prevalence of GABHS pharyngitis was 30.3%, and the peak prevalence was in spring. The Prevalence of GABHS decreased with age, positive cultured cases reported family history of rheumatic fever, recent contact with pharyngotonsillitis cases. The predictive clinical criteria for GABHS pharyngitis were tender anterior cervical lymph node, enlarged lymph node, a history of contact with cases, limb pain and enlarged tonsils.

Conclusion: further researched are needed to reevaluate continually the clinical signs associated with GABHS in the light of epidemiologic and demographic characteristics.

doi:10.1016/j.ijid.2008.05.1187

69.007

Seroepidemiology of Helicobacter pylori Infection Among Health Care Workers

M. Metanat, B. Sharifi-mood, S. Izadi, M. Miradi, A. Ghorbani-Vaghei, S.H. Dawudi, F. Fayyaz-Jahani*

Research center for infectious diseases and tropical medicine, Zahedan medical university, Zahedan, Iran (Islamic Republic of)

Introduction: Helicobacter pylori is a worldwide infection. Helicobacter pylori has now been well recognised to play a significant role in the pathogenesis of gastroduodenal disease. The prevalence is low in developed countries but high in developing countries. However very few data are actually available on H. pylori seroprevalence in Zahedan city. To determine the seroprevalence of Helicobacter pylori (H pylori) among health care workers and to assess the relationship between H pylori infection, age, sex, education stand, number of family, water source.

Methods and materials: This was a cross-sectional study which conducted on 97 healthy individual of health care