

Final Abstract Number: 53.041
 Session: *Epidemiology & Public Health*
 Date: Saturday, June 16, 2012
 Time: 12:45-14:15
 Room: Poster & Exhibition Area

Increase in cases of human anthrax Georgia, 2011

K. Napireli*, A. Navdarashvili, N. Tsertsvadze, M. Broladze

National Center for Disease Control and Public Health of Georgia, Tbilisi, Georgia

Background: Cutaneous anthrax is an endemic disease in Georgia with approximately 50 human cases reported each year. In 2011 the number of reported cases increased to 78. We conducted a retrospective investigation to determine the reasons for the increased incidence in 2011.

Methods: We reviewed all existing records for human and animal anthrax cases for the years 2002–2011. We reviewed laboratory records from 75 cases in 2011 that included 69 ulcer aspirates, 14 ulcer swabs, 29 blood samples, 1 stool, and 8 samples from soil and animal body parts. We reviewed all laboratory testing protocols and results.

Results: Of the 78 human cutaneous anthrax cases reported in 2011, 55 (70.5%) were laboratory confirmed and 23 (29.5%) were reported as probable. One case resulted in death. Human incidence rate of 1.75 per 100,000 in 2011 was 2.2 times higher than the average for the years 2002–2010 (0.78/100,000). In 2011, 57 blood and tissue samples were submitted from cattle which represented an increase of 3.4 times over the numbers for the previous 5 years for which records are available. 42% of these samples were positive representing a rise of 4.7 times over the 2010 rate (9% positive). Human cases age ranged from 10 to 75 years with a median of 42 years. 71 (91%) cases were in males, 37 cases (47.4%) were from Kvemo Kartli region. We detected 10 outbreaks with 28 cases. 8 outbreaks (with 23 cases) were from Kvemo Kartli region. 69 (88.5%) patients took part in slaughtering infected animals. 61 human cases were PCR positive, 34 were culture positive and PCR positive, 26 were PCR positive and culture negative, 15 were culture negative and PCR negative.

Conclusion: Slaughtering sick animals is the major mechanism for human infections and outbreaks in Georgia. The increased incidence in human cases in 2011 may be related to contact with a larger number of sick or infected cattle. We recommend stronger veterinary control measures for animal slaughtering especially in the Kvemo Kartli region.

<http://dx.doi.org/10.1016/j.ijid.2012.05.441>

Type: Poster Presentation

Final Abstract Number: 53.042
 Session: *Epidemiology & Public Health*
 Date: Saturday, June 16, 2012
 Time: 12:45-14:15
 Room: Poster & Exhibition Area

Cutaneous leishmaniasis in Hamadan, West of Iran (2004-2010)

M. Nazari*

Hamadan University of Medical Sciences, Hamadan, Iran, Islamic Republic of

Background: Cutaneous leishmaniasis (CL) is a parasitic disease in many tropical and sub-tropical countries; caused by protozoa of the genus *Leishmania* and can be transmitted by sand fly bites

Methods: This investigation is a descriptive, cross sectional and retrospective study. The disease was diagnosed based on clinical examination and microscopic observation of the parasite in the ulcer site from April 2004 to November 2010. Data processing and statistical analysis were performed using SPSS software, Ver. 16.

Results: The results revealed that number of infected cases in Hamadan were 81 people during the study. Maximum cases have been reported in 2006 (17 persons or 21%) and minimum in 2007 and 2010 (7 persons or 8.6%) in each year. Seventy-seven cases (95.1%) were men and the remaining four patients (4.9%) were female. The statistical difference between them were significant ($p < 0.01$). The majority of cases were groups of 16–30 and 31–45 years-old with 48.1% and 30.9%, respectively. Nearly 77.8% of the patients were living in urban and 22.2% in rural areas. Most of the cases (37.0%) had one and 28.4% two ulcers. The most common location of ulcers were on the hands (50.6%) and then on their feet (23.5%).

Conclusion: The steady trend of disease in different years showed that Hamadan city is a non-endemic area. Further epidemiological investigations of disease particularly CL are suggested.

<http://dx.doi.org/10.1016/j.ijid.2012.05.442>

Type: Poster Presentation

Final Abstract Number: 53.043
 Session: *Epidemiology & Public Health*
 Date: Saturday, June 16, 2012
 Time: 12:45-14:15
 Room: Poster & Exhibition Area

Climate change and its impact on incidence of malaria in central India

R. Nigam*

Indian Red Cross Hospital & Diagnostic Centre, Bhopal, – Select State –, India

Background: Climate change is progressing globally and is likely to affect the human health in various ways. Transmission of vector borne disease like malaria is likely to be affected by changes in various climatic factors. Variable relationships of various climatic factors and the incidence of malaria are shown in different studies. In view of above, the study, a correlation analysis of past five years' meteorological data of Bhopal city with incidence of malaria was conducted.

Methods: The mean minimum, maximum and average temperature, mean total rainfall and relative humidity from the period of 1952–2002 and monthly meteorological data from the period of 2004–2008 was used to project climatic changes in Bhopal city of central India. Monthly incidence of total malaria positive cases, and Annual Parasite Incidence (API) was obtained from 2004–2008 and 1999–2003 for comparative analysis using statistical techniques.

Results: Micro-climatic analysis of the city indicated a trend towards increase in monthly mean minimum temperature in the observation period as compared to last 50 years. So, the summers and winters were getting warmer with low precipitation and erratic pattern of rain fall over last five years which indicated a significant change in the climate of Bhopal that may be related to the changed incidence of diseases. The incidence of malaria, which was presumed to be more frequent during rainy season, was also showing its stronger impacts in early and late winters too. When minimum temperature increases in winter, the incidence of malaria was also increasing ($r = .28$).