

Seroepidemiological study on human brucellosis in Assiut Governorate

Asmaa A A Hussein¹, Amal S M Sayed, Mohamed A El Feki

Animal Hygiene & Zoonoses Department, Faculty of Veterinary Medicine, Assiut University, Assiut, Egypt.

PMID: 16734139

Brucellosis is the most important zoonotic disease constituting a public health problem in Assiut Governorate, hence this study was carried out to determine the prevalence of brucellosis among humans in Assiut Governorate. A total of 7154 peripheral blood samples were collected from patients with fever at Assiut Fever Hospital during the period from 2002-2003. A full detailed anamnestic and clinical assessment in the form of questionnaire was designed for each individual to determine the risk factors with specific emphasis to age, sex, residence and occupation. All serum samples were screened for Brucella antibodies by slide agglutination test. Positive sera were further analyzed by standard tube agglutination test. Enzyme linked immunosorbent assay (ELISA) was carried out to detect IgM and IgG Brucella antibodies. Statistical analysis was performed and correlation coefficient was done between all risk factors. Results declared that the prevalence of brucellosis was (1.29 +/- 0.004 %) and (1.22 +/- 0.002 %) as detected by agglutination and ELISA, respectively. IgM antibodies were estimated in 9.8 % of the examined patients, while IgG antibodies were found in 30.4 % of the examined patients, moreover both IgM and IgG antibodies were detected in 54.3 % of the examined patients. The prevalence of brucellosis was significantly ($P < 0.05$) affected by sex, where the rate of detection was higher among females (1.76 +/- 0.009 %) than males (1.05 +/- 0.004 %) as detected by agglutination test. On the other hand, the prevalence rate based on ELISA was (1.64 +/- 0.39 % and 1.01 +/- 0.89 %) for females and males, respectively. Prevalence of brucellosis was higher in rural areas (1.3 +/- 0.005 % & 1.25 +/- 0.009 %) than in urban areas (1.23 +/- 0.001% & 1.12 +/- 0.01 %) as detected by agglutination test and ELISA, respectively. The prevalence of brucellosis varied significantly between different occupational and age groups. Public health impact of brucellosis is discussed and suggestive measures for control are explained.