The Seroprevalence of Salmonellosis
and Q-Fever Among High Risk People
in Northern Jordan.

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Abstract

This study was carried out on high risk people in 1993 in order to assess the seroprevalence of salmonellosis and Q-Fever in northern Jordan. A sample of 1122 individuals (576 high risk and 546 control) was subjected to serological evaluation using Widal test and complement fixation test for salmonellosis and Q-fever, respectively. Another 40 blood samples were collected from typhoid patients and subjected to serological and biochemical identification of Salmonella typhi.

Enteric fever

A significant higher seroprevalence of typhoid fever among high risk people (25.7% and 13.2%) compared to the control samples (12.1% and 1.8%) was found for somatic and flagellar antigen, respectively. No significant difference in the prevalence of paratyphoid fever between the two groups. The overall seroprevalence was significantly higher among veterinarians than other occupations tested. The prevalence increased with age for flagellar antigen and decreased with age for somatic antigen. Seroprevalence was not affected by years at work. Seroprevalence of enteric fever was not influenced by sex. Ajloun had significantly higher seroprevalence than other areas of northern Jordan, including Mafraq, Irbid, Jarash and Ramtha. The results indicated the high seroprevalence among veterinarians in central Jordan, but no association was found between seroprevalence and locality of
veterinarians in central and north Jordan. The same tendency was also shown between Irbid compared to Amman. The prevalence increased with age for flagellar antigen and decreased with age for somatic antigen between veterinarians.

The results of this study showed that there is a relation between prevalence of typhoid fever but no relation between the prevalence of paratyphoid fever and contact with animals, but depends on the age of individuals.

**Q-Fever**

A significantly higher seroprevalence of Q-fever among high risk people (5.4%) compared to the control sample (0.4%) was found. The overall seroprevalence was significantly higher among veterinarians and sheep farmers than in other occupations tested. A relatively low percentage of cattle and meat handlers was seropositive. The prevalence increased with age and years at work. Seroprevalence of Q-Fever was not influenced by sex. Ramth and Mafrak had significant higher seroprevalence (P<0.05) than other areas of northern Jordan, including Irbid, Ajloun and Jerash.

The results indicated the high seropervalence among veterinarians in north Jordan, but no association was found between seroprevalence and locality of veterinarians in central and north Jordan. The same tendency also was shown between Irbid compared to Amman. Seroprevalence was present only among veterinarians of the age group (34-43 years). The results of this study emphasized the importance of contact infection, namely contact with infected animals and their products, and aerosols inhalation as acause of Q-Fever compared to infections by ingestion of contaminated animal products.