ORIGINAL ARTICLE Mirror of Research in Veterinary Sciences and Animals MRVSA/ Open Access DOAJ



Cross sectional study on seroprevalence of Coxiellosis (Q-Fever) in sheep, goat and man in Diyala Governorate

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ARTICLE INFO

Received: 16.05.2018 **Revised:** 23.05.2018 **Accepted:** 23.05.2018 **Publish online:** 25.06.2018

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Abstract

Coxiella burnetii(C. burnetii) is a major cause for global outbreaks of infectious abortion in animals, in addition to its zoonotic importance. This study aimed to determine the seroprevalence of C. burnetii antibodies in sheep, goats and humans in certain districts of Diyala Governorate. Blood samples were collected

from, 284 animals including 143 sheep and 141 goats of both sexes from flocks with history of reproductive problems. Blood samples were also collected from (90) human patients (26 males and 64 females) that attending Baqubah general and private hospitals and showing clinical signs of flu with fever and history of miscarriage in women. Serum samples were tested using Indirect Enzyme Linked Immunosorbent Assays (i-ELISAs). In animals, overall seroprevalence for C. burnetii was 37.68%; represented by 33.57% and 41.84%) in sheep and in goats respectively. According to sex, positive results were significantly higher in rams 47.37% than ewes 31.45%. However, does gave significantly higher seroprevalence 44.44% than bucks 20%. The aborted ewes showed significant higher seroprevalence 40.54% than random ewes 27.59%, while aborted does yielded significantly 73.33% higher seropositivity than random ones 41.28%. In humans, overall seroprevalence for C. burnetii was 18.9%, moreover, gender wise significant difference was not detected between men (15.4%) and women (20.3%). In addition, significant difference was not detected between seroprevalence to C. burnetii in aborted 15.6% and none aborted women 25%. In conclusion, this study approved the seroprevalence of C. burnetii in sheep and goat and humans with variations in its prevalence according to sexes and reproductive status. The authors recommended more future studies in another Iraq governorates to determine prevalence map of this disease in Iraq.

To cite this article: AL-Hashemi B M, AL-Bassam L S, AL-Shididi A M, AL-Busultan A S.(2018). Cross sectional study on seroprevalence of Coxiellosis (Q-Fever) in sheep, goat and man in Diyala Governorate. MRVSA. 7 (2), 1-16. doi: http://dx.doi.org/10.22428/mrvsa-2018-00721

Keywords: C. burnetii; Diyala Governorate; goats; humans; i-ELISAs; sheep.