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Molecular and serological data supporting the role of Q fever in abortions of sheep and goats in northern Egypt

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- Molecular and serological data supporting the role of Q fever in abortions of sheep and goats in northern
 Egypt
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- 13 Abstract

Q fever is a worldwide zoonotic disease, caused by *Coxiella burnetii* (*C. burnetii*), an obligate intracellular
bacterium. The epidemiological data about the Q fever situation in Egypt is limited.

- The present study investigated the seroprevalence of Q fever among small ruminants in some localities in the 16 northern Egypt and reported the shedders using specific real-time PCR (Rt-PCR). A total of 190 sera and 17 vaginal swabs (110 sheep and 80 goats) were collected from aborted cases. Indirect ELISA was used to detect 18 specific antibodies against C. burnetii, and Rt-PCR was used to detect DNA in the shedder animals. The study 19 revealed that infection was significantly higher in sheep (22.7%) than in goats (12.5%) (p < 0.05). The 20 Menoufia and Gharbia governorates had 20% seropositive animals while Qalubia and Alexandria had 15% and 21 17.5% seropositive animals, respectively. Using a Rt - PCR assay, C. burnetii was detected in 33.6% and 16.3% 22 of sheep and goats, respectively. The findings of the study demonstrate that Q fever may be enzotic among 23 small ruminants and distributed in the northern Egyptian Governorates. Further studies are needed in different 24 regions to gain better understanding of the epidemiology of Q fever all over the country and to develop an 25 appropriate preventive strategy for human and animals. 26
- 27 Keywords: Q fever, ELISA, Rt-PCR, small ruminants, Egypt
- 28 Introduction

Q fever is worldwide and highly infectious zoonotic disease, caused by *C. burnetii*. *C. burnetii* is an aerobic, intracellular, gram-negative bacterium which affects various domestic animal species [1, 2]. The ruminants are considered the main reservoir for the bacteria. *C. burnetii* is responsible for reproductive disorders in infected animals, including abortions that generally occur at the end of gestation, delivery of weak or dead offsprings, endometritis and infertility [3, 4]. Download English Version:

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