Seroepidemiologic and risk factor survey for Coxiella burnetii antibodies among Dutch veterinarians working with livestock.

Published: 06-11-2009
Last updated: 04-05-2024

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Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Bacterial infectious disorders
Study type	Observational invasive

Summary

ID

NL-OMON32616

Source
ToetsingOnline

Brief title
Q-VET

Condition

- Bacterial infectious disorders

Synonym
Coxiella burnetii infection, Query Fever

Research involving
Human

Sponsors and support

Primary sponsor: RIVM

Source(s) of monetary or material Support: RIVM,Gezondheidsdienst voor Dieren

Intervention

Keyword: Q fever, risk factors, serology, veterinarians

Outcome measures

Primary outcome

Past C. burnetii infection determined by IgG immunofluorescence assay (IFA) and

end point IgG titer in positive blood results.

Secondary outcome

not applicable

Study description

Background summary

Q fever, caused by Coxiella burnetii, is a worldwide zoonosis affecting both humans and animals, and a re-emerging public health problem in the Netherlands. In 2007, 2008 and 2009, there were large and prolonged outbreaks of Q fever. In 2007, a community outbreak with 176 laboratory-confirmed cases occurred in a rural area in the south of the Netherlands and in 2008 this number raised with a total of 1000 confirmed cases. In 2009 the epidemic is even larger and until 2 September 2009 a total of 2110 persons are notified with diagnosed acute Q-fever.
Dairy goats are considered an important source and Q fever-induced abortion wave have occurred at farms located near human Q-fever clusters in the South of the Netherlands. Veterinarians have a high level of exposure to Coxiella Burnetii, the causative organism of Q fever, especially those veterinarians who treat livestock.
Dutch data on veterinarians date from the 1980*s when Richardus et al. measured IgG antibodies against Coxiella burnetii among veterinarians and found a seroprevalence of 84%. Even though other studies used a different laboratory test and found lower seroprevalences, varying from 9.5%-63%, the veterinarian populations is considered a high-risk group for acquisition of Q-fever. This clearly stresses the need for research study assessing recent data about occurrence and risk factors of Q-fever among veterinarians in the Netherlands.
As a consequence of the research study and knowledge transfer, greater awareness of Q fever in this high-risk occupational group can prevent delays in

diagnosis and treatment and help identify chronic forms at an early stage. Also, increased awareness may enhance efforts to control further transmission between animals and humans.

Study objective

The aim of this study is to estimate the seroprevalence of past C. burnetii infection among veterinarians working with livestock and to identify (coccupational) risk factors associated with Q fever seropositivity in veterinarians. This will give insight into the epidemiological links and transmission routes, making it possible to recommend preventive measures to reduce transmission from infected animals to humans.

Study design

For this study, an individual self-administered questionnaire and a blood sample will be obtained from veterinarians attending the 3-day GGL conference in Doorn mid-November 2009. The questionnaires contain questions about person-based risk factors (age, gender, individual exposure to ruminants and pets, clothing protection measurements, consumption of raw milk or fresh dairy products, medical history, outdoor activities, tick-bites and contact with agricultural products such as hay and straw). The questionnaire will be self-administered by the veterinarian at home before visiting the GGL conference and after receipt at the GD and RIVM checked for completeness. If incomplete, additional information will be collected during the conference or by phone.
The blood samples will be collected during the GGL conference by a medical research assistant, with expertise and authorisation in blood sampling. Through a single venapuncture 2 tubes (4 ml) of serum will be obtained for determination of Coxiella burnetii serostatus with Q-Fever IgG immunofluorescence assay (Focus Diagnostics) for phase 1 and 2 IgG, using a cut off value of 1:32. End point IgG titers will be determined for samples with positive results. The Jeroen Bosch Hospital in Den Bosch will analyse the blood samples. The test result of the IgG test (IFA) does not have individual therapeutical implications as it represents historical exposure to Coxiella burnetii only. If indicated on the individual informed consent form, participants can request their test result with microbiological interpretation and guidance from their general practitioner; or receive the test result directly by post within 8 weeks after the blood sample was taken.

Study burden and risks

The burden for the participation of this study consist of:
-Blood sampling through a single venapuncture to obtain a serum sample 2 tubes (4 ml) by a research assistant (maximum 10 minutes per person). The research nurse will take the blood sample at the GGL conference in order not to burden

the study participants with extra travel time. Blood sampling will be divided in different time slots. The participants get information about the exact blood sample time in advance to minimize the waiting time at the blood sample spot.
-Completion of a questionnaire for those providing a blood sample (approx 15 minutes). This will be checked by the research assistant on completeness.
The risk are negligible as the study entails a single venapuncture during a farm visit carried out by a research assistant experienced in taking blood samples from all age groups and the completion of a hard-copy or online questionnaire. Study participants will be assigned an anonymous study ID which will be use to analyze and store the data. Results of the study will only be reported on a group level and cannot be deducted to the individual or to individual practices. If indicated on the individual informed consent form, participants can request their test result with microbiological interpretation and guidance from their general practitioner; or receive the test result directly by post within 8 weeks after the blood sample was taken.

Contacts

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RIVM

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age

Adults (18-64 years)
Elderly (65 years and older)

Inclusion criteria

being a veterinarian
participant of the GGL (Groep Gezondheidszorg Landbouwhuisdieren) conference, 16-18 November 2009, hotelconference centre Zonheuvel, the Netherlands

Exclusion criteria

none

Study design

Design

Study type: Observational invasive

Masking:	Open (masking not used)
Control:	Uncontrolled
Primary purpose:	Diagnostic

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	17-11-2009
Enrollment:	120
Type:	Actual

Ethics review

Approved WMO

Date:	06-11-2009
Application type:	First submission
Review commission:	METC Universitair Medisch Centrum Utrecht (Utrecht)

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
CCMO	NL29756.041.09