LETTER

# Q fever: hospitalisation and other concerns

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*Dear editor*

With keen interest I read the newsworthy article of Fanoy et al. about the general practitioners' skill and Q fever hospitalisation risks, recently published in the Netherlands Journal of Medicine.[1] The authors emphasized the role of trained primary care health workers in the early diagnosis and proper management of patients with Q fever, to reduce unnecessary hospitalisation.[1] This zoonosis mainly occurs through inhalation or ingestion of infected particles, specifically urine, feces, milk, or vaginal mucus from mammals infected with *Coxiella burnetii*.[1-3] Invertebrate hosts like ticks and amoebae may also harbour this agent in human environments.[3]

Acute infections by *C. burnetii* may be asymptomatic (20-80%) or manifest themselves by fever, flu-like symptoms, pneumonia or hepatitis. Chronic manifestations are uncommon (1-5%) and include endocarditis, arteritis, pericarditis, osteoarthritis, and lymphadenitis.[1-4] Outbreaks in the Netherlands confirmed the potential public health burden of this zoonosis,[1,3] the role of small ruminants and the significance of the number of unsuspected chronic infections.[3] The Dutch consensus gave rise to new diagnostic criteria for chronic Q fever. Proven cases are defined by positive tests for *C. burnetii* and endocarditis or vascular infections.[3] Worthy of note, vascular involvement of Q fever is more often diagnosed in this region,[2,3] where the hospitalisation rate of patients presenting with acute infection is approximately 2-5%.[1] The authors highlighted the need for disseminating epidemiological, diagnostic and management updates among general practitioners, to reduce the hospitalisation of patients with Q fever.[1] The median duration of hospitalisation was seven days, with a mean diagnostic delay of 29 days; however, prior experience, higher awareness, and more rapid tests can change this situation.[1] Fanoy et al.'s original study is indeed a major contribution with respect to public health concerns in high income countries,[1] but the following remarks may somehow be appropriate.

The primary course of Q fever is often asymptomatic and misdiagnosis is frequent. For these reasons, early detection of the disease and prevention of long-term complications are challenging tasks. This zoonosis mimics and can be related to endocarditis and large or medium sized arteritis,[1-4] so these should be ruled out in cases with clinical suspicion of giant cell or Takayasu's arteritis.[2,4] Q fever is a reportable disease and *C. burnetii* is classified as a potential bioterrorism agent.[3] In areas with a high burden of disease, vaccination of farmers, veterinary and slaughterhouse workers may be useful,[3] after screening the antibodies to prevent strong immune reactions. Equipment including N95 respiratory protection is indicated in laboratories and with autopsies.[3] Consensual diagnostic and management protocols for Q fever are lacking worldwide.

## DISCLOSURES

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## REFERENCES

1. Fanoy E, Dijkstra F, van der Hoek W, Schneeberger P, van de Kassteele J, Rietveld A. Familiarity of general practitioners with Q fever decreases hospitalisation risk. Neth J Med. 2018;76:184-9.
2. de Worm S, Giot JB, Courtoy C, et al. A case of giant cell arteritis associated with culture-proven *Coxiella burnetii* aortitis. Int J Infect Dis. 2018;69:50-4.
3. Eldin C, Mélenotte C, Mediannikov O, et al. From Q fever to *Coxiella burnetii* infection: a paradigm change. Clin Microbiol Rev. 2017;30:115-90.
4. Baziaka F, Karaiskos I, Galani L, et al. Large vessel vasculitis in a patient with acute Q-fever: a case report. IDcases. 2014;1:56-9.