grade fever of 2 months’ duration. His past medical history was unremarkable, except for pulmonary tuberculosis treated 55 years earlier and chronic glaucoma. He lived in a rural area and had rare contact with cattle. On admission, his body temperature was 39.5°C; his right laterocervical lymph nodes were enlarged (3 cm x 4 cm) and inflamed. Blood values were unremarkable except for an elevated C-reactive protein level of 150 mg/L (normal=6). A computed tomography scan of the chest showed hilar calcifications and enlarged mediastinal lymph nodes. A biopsy of cervical lymph nodes indicated granulomatous lymphadenitis with foci of necrosis. C. burnetii DNA was detected on the lymph nodes with a C. burnetii–specific pair of primers that amplified an htpAB-associated repetitive element (6). Results of serologic testing by indirect immunofluorescence (IF) were positive for C. burnetii with immunoglobulin (Ig) G antibody titer to phase 1 antigen of 320 and IgM antibody titer to phase 1 antigen of 800.

Granulomatous lymphadenitis has been described during mycobacterial infections, tularemia, cat scratch disease, yersiniosis, lymphogranuloma venereum, histoplasmosis, coccidioidomycosis, and chronic granulomatous diseases (7). One well-documented case of acute Q fever with necrotic cervical lymphadenitis has been recently reported (8); to our knowledge, granulomatous lymphadenitis has never been reported during Q fever. In both cases reported here, C. burnetii was the likely etiologic agent, given the results of polymerase chain reaction and serologic studies (patient 1) or the patient’s occupation and results of the serologic testing (patient 2). Moreover, for both, no other potential cause could be identified, and the response to doxycycline-rifampin regimen was favorable. We suggest that granulomatous lymphadenitis be added to the list of atypical presentations of Q fever.

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References

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Has Coxiella burnetii (Q fever) Been Introduced into New Zealand?

To the Editor: New Zealand has been an exception to the panglobal distribution of Coxiella burnetii (1), the causative organism of Q fever, as shown in a 1990–1991 study (2) of 12,556 sheepdogs and 2,181 aborting cattle, all seronegative for C. burnetii. In 1997, the Rabbit hemorrhagic disease virus (RHDV) was illegally imported from Australia into Central Otago, New Zealand, for the purpose of rabbit control. The unknown source and purity of RHDV, and the potential use of infected rabbits or their organs to transport it, meant that C. burnetii could have been coincidentally introduced along with the RHDV-infected rabbit material. To establish whether this occurred, we examined serum
specimens from 97 participants enrolled in the RHDV human health study for antibodies to Q fever (3).

*C. burnetii* is a very infective organism; it can remain viable for long periods in harsh environmental conditions (1). The primary route of human exposure is aerosol dispersion (1), and airborne agricultural dusts containing the organism have been implicated in the infection of distant communities (4).

Wild rabbits are part of the extensive reservoir of *C. burnetii* in the animal kingdom (1) and have been linked with Q fever (5). In the United States, 53% of wild rabbits and 39% of wild jackrabbits were found to have antibodies to *C. burnetii*, and the organism has been isolated from both these species (6); in Nova Scotia, 49% of hares had antibodies to *C. burnetii* (7). In Australia, Q fever is estimated to result in at least 1,700 weeks of lost work time annually, primarily affecting people in the eastern states (8).

We could not find evidence of *C. burnetii* in Australian rabbits despite the frequency of Q fever in that country (8) and reports of extensive *C. burnetii* infection of rabbits in other countries (6). However, the presence of RHDV-infected rabbits in the part of Australia where Q fever is most often reported (8,9) suggested that the rabbit tissue imported to New Zealand in 1997 might have been infected with *C. burnetii*.

A local lawyer enrolled the study participants anonymously on the basis of their possible exposure to the illegally imported rabbit material. These participants provided serum samples and answered interviewer-administered questionnaires 15 weeks after the first confirmation of the virus (3). As a result of the controversy and potential legal proceedings surrounding the circumstances of the biosecurity breach, several questions were considered too sensitive and were not asked; these included the participants’ travel history and exact details of their roles in processing the infected rabbit material. However, in many cases the participants volunteered additional information regarding their exposures.

Nearly all participants (86/97) had had contact with rabbits, and more than half (53/97) appeared to have had contact with RHDV-infected rabbit material. Anecdotal reports suggest that heavy exposures occurred during the harvesting and processing of infected rabbit body organs, spraying of infective organ mixtures onto bait, and distribution of these infective baits by air and ground over 136,000 hectares (340,000 acres).

Thirteen persons were considered to have had a variety of inhalation exposures. Four persons mentioned tasting, smelling, breathing, or having the spray blown in their face for 3–5 hours; another four participants referred to their involvement in spraying. Another four participants had concerns about their inhalation exposures, and one person was included on the basis of exposure while shoveling carrots mixed with infected rabbit blood and molasses. Many additional aerosol exposures likely occurred that the researchers could not specifically identify.

Of the 97 serum samples, 3 were classified as positive to *C. burnetii*, 1 as equivocal, and 93 as negative by using an enzyme-linked immunosorbent assay (PanBio IgG Cat No QFG 100, Brisbane, Australia). On the basis of a single test, determining how many of the results were false positive is difficult: an assay specificity estimate of 95.7% (10) suggests we might expect to correctly identify 93 negative serum samples in a population of 97 with no exposure to Q fever.

No evidence of an association between seropositivity and exposure to infective rabbit material was apparent. The most strongly positive result was found in a person who had described no major exposures. One positive result occurred among 39 persons with possible direct contact (i.e., open wound) exposure, and another among 17 persons who had eaten possibly infected rabbit material. None of the 13 persons with inhalation exposures, the 2 persons with needlestick injuries, or the 1 person with a definite bait consumption exposure had serum samples that were positive or equivocal. Likewise, none of the seven persons with reported health problems

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**James A. Ferguson Emerging Infectious Diseases Fellowship**

The Office of Minority and Women’s Health, National Center for Infectious Diseases, Center for Disease Control and Prevention (CDC), announces the James A. Ferguson Emerging Infectious Diseases Fellowship Program, 2003.

This fellowship program is an 8-week professional development experience for racial and ethnic minority students in medical, dental, veterinary, pharmacy, and masters of public health graduate programs. Fellows participate in a broad array of public health activities. The program is administered through a cooperative agreement between the Minority Health Professions Foundation and the National Center for Infectious Diseases, CDC. Fellows are paired with a mentor based on their statement of interests and qualifications. They are required to prepare and present a formal scientific presentation on their work to CDC scientists and staff at the end of the program and to submit a formal research paper. The students receive stipends, housing, and transportation to and from Atlanta.

The program is designed to increase the students’ knowledge of public health and public health career paths and to introduce fellows to careers addressing infectious diseases and racial and ethnic health disparities. The ultimate goal of the program is to influence students to pursue careers in public health and specific disciplines needed by the National Center for Infectious Diseases to strengthen and diversify the workforce.

The deadline for submitting applications for this fellowship is February 28, 2003. For additional information about the program, please contact Edith A. Hambie at eah1@cdc.gov, or call 404-371-5310.
had serum samples that were either positive or equivocal. The low prevalence of antibodies to *C. burnetii* in the participants in our study (3/97) indicates that most were very unlikely to have had contact with the organism. If the results are true positives, the source of the infection was quite likely outside of New Zealand. However, considering the heavy exposures associated with the cultivation and harvesting of RHDV in live rabbits and the known infectivity of Q fever, *C. burnetii* was not likely to have been introduced inadvertently to New Zealand at the same time as RHDV.

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**Correction, Vol.8, No.12**

In the article, “Antimicrobial Resistance of *Escherichia coli* O26, O103, O111, O128, and O145 from Animals and Humans” by Carl M. Schroeder et al., errors occurred in the figure on page 1412. The corrected figure appears below and online at http://www.cdc.gov/ncidod/eid/vol8no12/02-0070.htm. We regret any confusion these errors may have caused.

**Correction, Vol. 8, No. 10**

In “Investigation of Bioterrorism-Related Anthrax, United States, 2001: Epidemiologic Findings” by Daniel B. Jernigan et al., errors occurred in the listing of the members of the Anthrax Epidemiologic Investigation Team on page 1019. Additional members of the National Anthrax Epidemiologic Investigation Team are:


We regret any confusion these errors may have caused.