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Abstract (oral session)

Q fever cluster in the tourist vineyard of Lavaux, Switzerland

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Objectives: Coxiella burnetii infection (Q fever) is a widespread zoonosis, with domestic animals, such as cattle, sheep and goats as main reservoir. Infected animals are often asymptomatic, but abortions might occur. Human's infection occurs mainly via inhalation of aerosolized particles shed from infected animals. In Switzerland, this disease has a low endemicity. Human's infections reports to public health authority were no more mandatory since 1999. By contrast, veterinary disease is reportable and 78 animal cases were announced in 2011. Between February and May 2012, we observed a cluster of 10 human cases of acute Q fever infections characterized by prolonged fever, asthenia and mild hepatitis. Thus, we started epidemiological and veterinary investigations. Methods: Epidemiological investigations were initially based on patients' interviews to identify the outbreak source. From a random sample of suspected animals, vaginal swab were tested with a specific Coxiella burnetii PCR to confirm the source. Results: We identified a sheep farm located in the touristic Vineyard of Lavaux (Switzerland) as the likely outbreak source. From the suspected flock of approximately 1000 sheep, 52 randomly selected animals were tested, demonstrating that 42% of the tested sheep were carrying the bacteria. Mitigation measures of veterinary officials included limiting humans contact with the flock, hygiene measures, and flock vaccination. Public health officers diffused an official communication with the intent to improve public and physician awareness of this illness, in order to improve detection of additional cases since up to 5% of infected patients can suffer from severe morbidity of chronic infection. After this alert, only 4 additional human cases were notified, all from July to August 2012. Since November 2012, Q fever should again be reported to Swiss public health authorities, but no additional cases have been notified so far. Conclusion: The active early measures taken might have been sufficient to avoid a much larger outbreak. The next spring season will be critical to confirm that the epidemic is effectively under control. A close follow-up of human cases will be necessary to identify chronic Q-fever.