

Editorial Board

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Brucella canis: an update

While the restrictions of the COVID-19 pandemic and the wake of Brexit have resulted in a dramatic decrease in the number of pets travelling abroad from the UK, the numbers of pets being rescued from abroad and imported into the UK has increased exponentially. As a consequence of this, concerns have arisen around the increasing numbers of imported dogs found to be carrying *Brucella canis*.

B. canis is a Gram-negative coccobacilli bacteria, predominantly infecting domestic dogs. While many cases are clinically mild, infection is typically associated with reproductive abnormalities including infertility, abortion, endometritis, epididymitis and orchitis and scrotal oedema. A wide range of non-reproductive conditions can also occur though, including chronic uveitis, endophthalmitis and discospondylitis. Lymphadenitis is also common, along with non-specific clinical signs such as lethargy, exercise intolerance, decreased appetite and weight loss.

Transmission occurs via reproductive fluids, but is also shed in the urine, blood and saliva of infected individuals. Once these dogs are infected, infection either persists for 2-3 years before elimination by the immune system, or a lifelong infection establishes. Antibiotic therapy is not effective at eliminating infection.

Cases of *Brucella* in humans are reportedly rare, with between one and two hundred cases a year being reported in the USA. There have currently been no confirmed cases resulting from contact with infected dogs in the UK. However, the consequences of zoonotic exposure can be significant, especially in those whose immune systems are suppressed. Serious complications in humans include septic arthritis, osteomyelitis and endocarditis. Therefore, vigilance for the signs of infection in imported dogs is vital to reducing the zoonotic risk to both veterinary professionals and pet owners, as well as minimising the risk of endemic foci developing in the UK.

Imported dogs with relevant clinical signs should be handled with appropriate personal protective equipment and diagnostic tests recommended to the pet's owner. Where infection is suspected, this should be highlighted in lab paperwork so appropriate precautions can be taken when handling samples. Screening of healthy dogs for *Brucella* should also be encouraged, ideally by charities importing dogs, or on their arrival in to the UK. It is important to discuss appropriate testing with the lab being used, as they will have preferences regarding sensitivity and specificity of tests, depending on whether a clinical case is being investigated or a screening test being carried out.

Brucellosis in dogs is now reportable and can be reported via local Animal and Plant Health Agency veterinary investigation centres. There is still a strong argument for euthanising dogs that test positive for *Brucella*, given the difficulties involved in eliminating infections and the subsequent zoonotic risk. Owners should be prepared for this possibility when testing is initially discussed. Alternatively, as a minimum, dogs should be neutered with pre- and postoperative antibiotics. Dogs infected with *B. canis* must not be used for breeding, should not live with immune compromised individuals and should not interact with other dogs.

There remains a strong case for the introduction of compulsory testing for *B. canis* before dogs are imported into the UK from countries where this disease is endemic. Until this occurs, veterinary professionals remain the first line of defence in the UK against this novel pathogen. **CA**



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