

Letters

EMERGING DISEASE

Brucella canis in a dog in the UK

WE wish to report the isolation of *Brucella canis* from a case of suspected diskospondylitis in an imported dog.

The animal, a rescue dog adopted in January 2016 following import from Romania, was first presented in April 2016 to a practice in Leicestershire. It displayed intermittent signs of pain when rising from a sitting position. Lesions consistent with diskospondylitis were detected via radiography in September 2016. The signs resolved with antibiotic treatment (amoxicillin/clavulanic acid for 15 weeks) but recurred after treatment stopped with gradual deterioration of overall health. On February 24, 2017, a blood sample for culture was collected and submitted to Lab Services.

After broth enrichment, a pure growth of a *Brucella* species was obtained and confirmed as *B canis* at APHA Weybridge. Due to progression of the disease and the poor prognosis, the dog was euthanased.

B canis is endemic in canids in many countries, with increasing reports in mainland Europe (Corrente and others 2010, Hofer and others 2012, Holst and others 2012, Gyuranecz and others 2013), but is not thought to be endemic in UK. However, while some other species of *Brucella* are notifiable, *B canis*, if isolated in a dog, is neither notifiable nor reportable to veterinary authorities. In endemic areas, the main manifestation is as a genital disease – abortions or infertility may be observed in females and orchitis, epididymitis, prostatitis and infertility in males. Presentation with systemic signs not related to reproduction (principally lymphadenopathy, diskospondylitis, ocular lesions) may be observed. *B canis* infection appears most commonly in stray populations or where breeding of animals is poorly controlled.

Systemic manifestations of infection in canids have been reported in countries considered free of the disease, usually in animals imported from endemic areas. Reports from the UK before 2017 are rare and the organism has not previously been isolated, besides a single case in a dog that had travelled to Spain and America,

presenting with diskospondylitis while in quarantine (Dunne and others 2002). Taylor (1980) found earlier serological evidence of *B canis* infection in two dogs imported from the USA. Earlier this year, a possible case was reported from Glasgow involving an imported rescue dog from Romania and suspected on the basis of clinical signs and serology (McLaughlan and others 2017). It presented with lymphadenopathy and ocular disease and euthanasia was elected due to poor response to antibiotic treatment.

The organism can infect people, but reported cases are rare. As with all *Brucella* species, laboratory workers are at greatest risk. In this case a public health risk assessment was carried out for all personnel in contact with the sample, cultures or dog. Information leaflets were provided; laboratory testing and postexposure prophylaxis were offered where indicated.

The present culture-confirmed case, together with the recent report from Glasgow, raise new considerations for the veterinary profession in the UK.

■ *B canis* should be considered as a

differential diagnosis for reproductive or chronic inflammatory disease, particularly in dogs presenting following importation to the UK.

- History taking should include inquiries about possible foreign travel/origin. This information needs to be included in the history given to laboratories receiving samples.
- The risk to human health needs to be considered by veterinary practices and laboratories where animals present with clinical signs compatible with *B canis* infection; public health authorities should be contacted for advice whenever *B canis* exposure is suspected by practice or laboratory staff.

In England the local Public Health England health protection team can be found at www.gov.uk/health-protection-team. This website also includes links for services in Wales, Scotland and Northern Ireland.

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References

- CORRENTE, M., FRANCHINI, D., DECARO, N., GRECO, G., D'ABRAMO, M., GRECO, M. E., LATRONICO, E., CROVACE, A. & MARTELLA, V. (2010) Detection of *Brucella canis* in a dog in Italy. *New Microbiologica* **33**, 337-341
- DUNNE, J., MCMILLAN, A. & PERRETT, L. L. (2002) Canine brucellosis in a dog imported into the UK. *Veterinary Record* **151**, 247
- GYURANECZ, M., RANNALS, B. D., ALLEN, C. A., JÁNOSI, S., KEIM, P. S. & FOSTER, J. T. (2013) Within-host evolution of *Brucella canis* during a canine brucellosis outbreak in a kennel. *BMC Veterinary Research* **9**, 76
- HOFER, E., BAG, Z. N., REVILLA-FERNÁNDEZ, S., MELZER, F., TOMASO, H., LOPEZ-GONI, I., FASCHING, G. & SCHMOLL, F. (2012) First detection of *Brucella canis* infections in a breeding kennel in Austria. *New Microbiologica* **35**, 507-510
- HOLST, B. S., LÖFCVIST, K., ERNHOLM, L., ELD, K., CEDERSMYG, M. & HALLGREN, G. (2012) The first case of *Brucella canis* in Sweden: background, case report and recommendations from a northern European perspective. *Acta Veterinaria Scandinavica* **54**, 18
- MCLAUCHLAN, G., PEPLINSKI, G., SPENCE, S. &

BRUCE, C. (2017) Warning after dog tests positive for brucellosis. *Veterinary Times* **47**, 31

TAYLOR, D. J. (1980) Serological evidence for the presence of *Brucella canis* infection in dogs in Britain. *Veterinary Record* **106**, 102-103

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