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Case Report

Autochthonous babesiosis in the United Kingdom

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A four-year-old male neutered American bulldog presented to the Queen Mother Hospital, Royal Veterinary College in November 2015 with a 3-day history of inappetence and pigmenturia. There was no history of parasite control or travel outside Essex. Physical examination revealed lethargy and mild tachypnoea but was otherwise unremarkable.

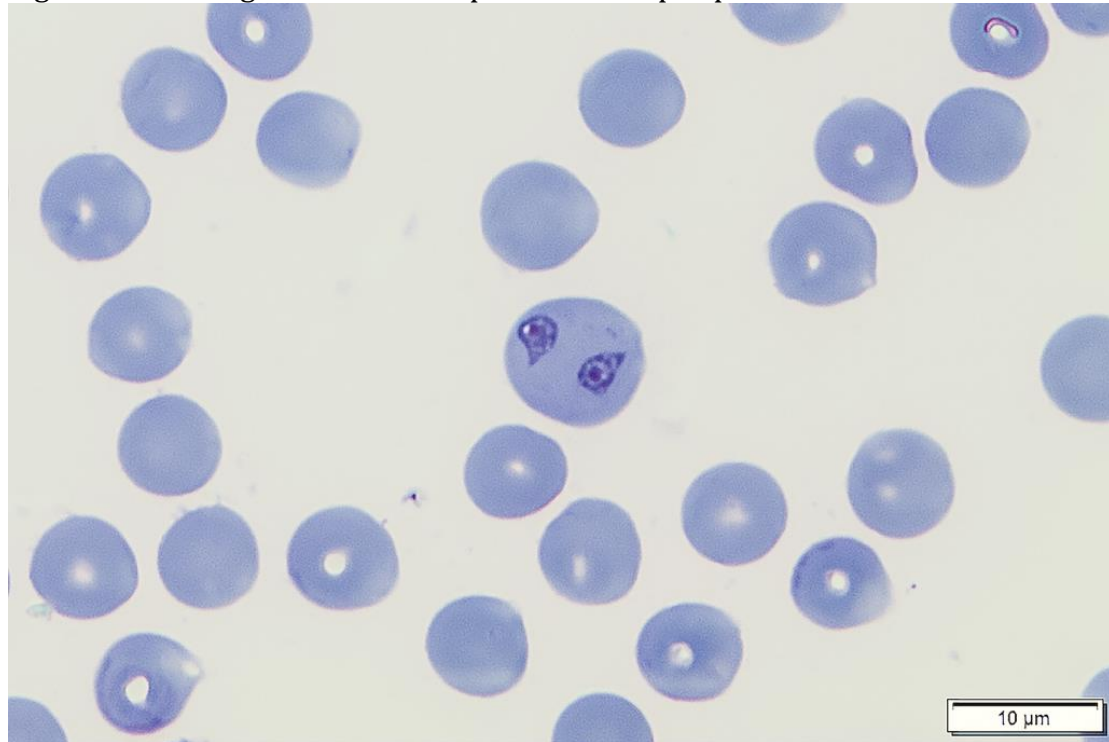
Angiostrongylosis was diagnosed by snap test, Baermann faecal floatation testing and compatible thoracic radiography. There was also moderate non-regenerative anaemia [PCV 26% (Reference interval (RI) 37 to 45)], thrombocytopenia [$38 \times 10^9/L$ (RI 150 to 900)] and lymphopenia [$0.65 \times 10^9/L$ (RI 1 to 4.8)]; intraerythrocytic inclusions and extracellular forms consistent with *Babesia canis* were apparent on blood smears (Fig 1). Polymerase chain reaction (PCR) and sequencing confirmed a diagnosis of *B. canis* infection.

Angiostrongylosis was treated routinely together with a prophylactic dose of dexamethasone. Babesiosis was treated with imidocarb dipropionate administered intramuscularly (6.6 mg/kg) and over the next 2 hours the dog developed ptalism and tachypnoea with harsh lung sounds. These recognised cholinergic adverse effects of imidocarb were managed with atropine, which was also administered prior to the second imidocarb dose. The dog received a packed red blood cell transfusion because of progressive anaemia but made a full clinical recovery.

This is the second case of autochthonous babesiosis in a UK dog, and the first for *B. canis* (*B. vogeli* was diagnosed in 2006). Since November 2015, there have been at least three further cases of canine babesiosis in untravelling dogs from Essex, all were confirmed *B. canis* infections by PCR. *Dermacentor reticulatus* ticks were found on the dogs.

Canine babesiosis frequently causes haemolytic anaemia, thrombocytopenia, pyrexia and splenomegaly. Severe cases may exhibit acute kidney injury, coagulopathies, immune-mediated haemolytic anaemia and hepatic dysfunction. Examination of blood smears, especially those from peripheral ear veins, plus PCR testing on Ethylenediamine tetraacetic acid (EDTA)-anticoagulated blood, is required for diagnosis.

Figure 1. Two large *Babesia canis* parasites in a peripheral blood smear



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