Are we underestimating tick-borne diseases in cats?

The potential consequences of ticks and tick-borne diseases in cats are often overlooked; what is best practice for tick prevention and removal?

Ticks and tick-borne diseases in dogs have received a lot of publicity in the veterinary press and wider media over the last 18 months. The Big Tick Project, the outbreak of babesiosis in Essex (sometimes reported sensational and confusingly in the press – Figure 1) and high-profile human Lyme disease cases all led to increased public awareness and concern regarding canine tick-borne disease potential zoonotic risk. What has been largely overlooked, however, is the number of cats that are also exposed to ticks and the role they might play in spreading tick-borne diseases.

As well as gathering data on dogs, the Big Tick Project (Abdullah et al., 2016; Davies et al., 2017) asked vets to check cats coming into practices, record if any ticks were present and submit any they found: 1,855 cats were examined for ticks across 278 practices and 6.6% of cats were found to have ticks.

This is not as high a number as dogs (approximately one in three), but purely indoor cats are at very low risk of tick infection so prevalence in cats with outdoor access is likely to be much higher.

Male cats, those four to six years of age, those living in rural areas and those not neutered were found to be at greatest risk of infestation. This demonstrates that lifestyle factors (young, male entire cats are more likely to roam) and geographic factors (rural areas are likely to have higher number of ticks) influence the likelihood of cats being exposed.

Ticks are ugly! If they caused no other disease, this would be reason enough for many owners to want to avoid infestation in their pets or have them removed

The observation that cats with outdoor access are vulnerable to tick infection is also supported by real-time data such as that recently published by Liverpool University (Tulloch et al., 2017). This study confirmed that ticks were being found on cats throughout the year in most parts of the country, but with marked seasonal peaks through the summer.

Cats also experienced a second marked seasonal peak in the autumn. Infection rates in cats were found to be very comparable to dogs. The ticks in both studies were identified as *Ixodes* spp (predominantly *I. ricinus*, 57.1% – Figure 2 – and *I. hexagonus*, 41.4% – Figure 3) capable of transmitting Lyme disease and *Borrelia* spp were found in 1.8% of ticks examined. Small Babesias such as *B. microti* and *B. vulpis* capable of causing disease in pets were also found in 1.1% of the ticks (Davies et al., 2017).

Exposure of cats to ticks, therefore, has a number of potential consequences: