These included three (one *I. ricinus* and two *I. hexagonus*) taken off a stray ferret, one *I. ricinus* and one *Ixodes* spp. taken off two cats, and three *I. ricinus* taken from three dogs. Ticks were collected all year round.

STATEMENT

The data collected shows that ticks can be found on companion animals all year round and that although the threat of *B. burgdorferi* s.l. infections is low it is still a threat to animals in Cumbria.

Prevalence and antimicrobial susceptibility patterns of bacterial isolates associated with hepatobiliary infection in cats and dogs

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OBJECTIVES

The aim of this study was to analyse bacterial culture and antimicrobial susceptibility results obtained from bile and liver specimens collected from dogs and cats and investigated for hepatobiliary disease at a Small Animal Hospital in the UK.

METHODS

Five-hundred and thirteen samples were submitted to the Microbiology Laboratory from 2011-2016 (262 liver

biopsies/bile from the same cases and, separately, 176 bile samples and 75 liver biopsies) for culture and susceptibility testing (C&S).

RESULTS

Overall, 73 bile (16%) and 20 liver (5.7%) samples yielded bacterial cultures. Thirty-eight different bacterial species were identified and the most prevalent were *Escherichia coli*, *Enterococcus* spp., *Campylobacter* spp. and *Clostridium* spp. (30, 15, 14 and 7% respectively). When liver and bile sample were submitted from the same case, bile was more likely to be positive (71 vs 18).

E. coli isolates showed resistance to ampicillin (58%), fluoroquinolones (37%), tetracycline (32%), trimethoprim/sulfamethoxazole (26%) and cefazolin (21%). However, *E. coli* isolates were fully susceptible to aminoglycosides and imipenem. *Enterococcus* spp. isolates showed unpredictable profiles where all isolates were resistant to enrofloxacin and erythromycin and 66% of isolates were resistant to tetracycline and gentamicin.

STATEMENT

These results emphasize the importance of performing direct Gram smear examination when considering initiation of empirical antimicrobial therapy. As such, the presence of Gram-negative coccobacilli (likely *E. coli*) may indicate that gentamicin could be a suitable option before C&S results are available whilst the presence of Gram-positive coccoid bacteria (likely *Enterococcus*) indicates that empiric therapy will rarely be right without C&S.