

Poster topic 03

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A nested case-control study to identify risk factors for recurrent colic

Scantlebury, C., Archer, D., Proudman, C. and Pinchbeck, G., Institute of infection and global health, University of Liverpool, United Kingdom; claire.scantlebury@liverpool.ac.uk

A nested case-control design was used with cases and unmatched, randomly selected controls selected from a previous longitudinal cohort study of 127 horses recruited via first opinion equine veterinary surgeons subsequent to an episode of medical colic. Telephone questionnaires at 4 monthly intervals collected data on risk factors and on recurrence of colic. All recurrent colic episodes were selected as cases and the data relating to 30 days prior to the colic were used to determine exposure status. Three controls per case were randomly selected from all horse time at risk. Multivariable logistic regression analyses were used to determine risk factors for recurrence of colic with a random effect term for 'horse'. In total 59 recurrent colic episodes and 177 controls were included. The final model showed that horses that displayed crib-biting/windsucking behaviour (CBWS), weaved, had reduced access to pasture and were fed probiotics had an increased risk of colic. Fruit/vegetables as part of the diet appeared to have a protective effect against recurrence. A significant interaction was found whereby the risk associated with CBWS was modified by feeding fruit and vegetables. The use of a nested case-control design within the cohort study enabled capture of time-varying exposures. In contrast to previously published case-control studies on colic the exposures were recorded prior to becoming a case. Recurrent colic is a risk for horses that have experienced a medical colic and the study findings provide evidence to support approaches to colic prevention. The behavioural risk factors identified may highlight individuals at higher risk for recurrent colic whose colic prevention strategies should be carefully managed.