

Research Digest

Selected highlights from other veterinary journals

Assessing the prevalence and welfare implications of inherited disorders in pedigree dogs

J. F. Summers, G. Diesel, L. Asher, P. D. McGreevy, L. M. Collins

THE number and severity of inherited disorders with no apparent link to conformation were examined in pedigree dogs in the second part of a study that reviewed the impact of breeding for particular characteristics on the welfare of a breed (part one studied conformation-linked disorders related to breed standards and is summarised in *VR*, January 2, 2010, vol 166, p 26).

Information was compiled from a literature review of the top 50 Kennel Club registered breeds in the UK and included details of the body systems affected. A six-level grading system, the 'strength of evidence for hereditary basis' scale (SEHB), was developed to compare the quality of available evidence on the heritability of a disease. The generic illness severity index for dogs (GSID) was used to score and compare the impact of different disorders on the health and welfare of a breed.

A total of 312 inherited disorders were identified, with the majority being inherited in an autosomal recessive manner. The breed found to be susceptible to the most disorders (58 different disorders) was the German shepherd dog. Disorders affecting the largest number of breeds were hypothyroidism (43 breeds), hereditary adult-onset cataract (38 breeds) and progressive retinal atrophy (35 breeds); scores for the possible severity of these diseases were shown to range widely for different breeds. The body system most affected was the nervous-sensory system.

The authors identified a lack of reliable, country-specific prevalence data for inherited diseases in the dog population, in individual breeds and in crossbreeds for comparison to pedigree populations. Future research would allow a quantitative assessment of the welfare impact of inherited disorders on the pedigree dog population in the UK.

Veterinary Journal (2010) 183, 39-45
(doi: 10.1016/j.tvjl.2009.11.002)

doi: 10.1136/vr.c51

Providing an accurate faecal egg count in horses: analysis of faecal sample storage

M. K. Nielsen, A. N. Vidyashankar, U. V. Andersen, K. DeLisi, K. Pilegaard, R. M. Kaplan

STRONGYLID egg counts are gaining increasing importance for monitoring parasite infection and anthelmintic resistance in horses. The effects of storage on faecal egg count (FEC) measurements may therefore be important in obtaining accurate and comparable results, and the identification of procedures that could be implemented as best practice are therefore warranted. This study measured the effects of storage temperature, time and type of container on FEC.

Faecal samples from a horse determined to be shedding 200 to 500 epg were collected rectally and stored in an airtight container in one of four temperature-dependent locations: a freezer, refrigerator, incubator or at room temperature. In another experiment, samples were stored on the floor of a stable in either an airtight container or left in the open air. FEC was measured at successive times following storage. The study was conducted in two separate locations at different times

of year: in Georgia, USA, during June and July, and Copenhagen, Denmark, in November.

At both locations, samples kept in the refrigerator showed no decline in FEC compared with samples stored in the freezer or incubator, which showed a decrease in FEC over time. At room temperature, FEC remained stable in samples from the USA but showed a significant decrease in samples from Denmark after 24 hours. In the USA, samples left in the open air showed a significant decline in FEC compared to those stored in an airtight container after 12 hours, whereas in Denmark, no differences were shown between airtight and open-air storage; this was attributed to the different temperatures in the two countries.

Refrigeration was shown to be the best storage method for faecal samples; however, accurate results could also be obtained from faecal samples collected from the ground within 12 hours.

Veterinary Parasitology (2010) 167, 55-61
(doi: 10.1016/j.vetpar.2009.09.043)

doi: 10.1136/vr.c53

Type I canine enteric coronavirus reported at a low prevalence in dogs in the UK

J. Stavisky, G. L. Pinchbeck, A. J. German, S. Dawson, R. M. Gaskell, R. Ryvar, A. D. Radford

CANINE enteric coronavirus (CECoV) is a pathogen commonly found in dogs, which has been shown to exist in two closely related forms; infection may occur from one or both strains. As there is limited data on the prevalence of CECoV, and commercial diagnostic tests suitable for distinction between the two virus strains are not widely available, this study aimed to investigate the carriage of types I and II CECoV in the dog population in the UK.

Twenty veterinary practices, randomly chosen from across the UK, were asked to pick dogs presented to the practice for any reason, to reflect the clientele and caseload of the practice. The final sample included 249 dogs, with a mean of 12 dogs per practice. The majority of dogs (144) were from single-dog households.

A faecal sample was obtained from each dog and a brief questionnaire was used to record demographic and clinical data on the animal, which included any recent history of enteric disease. Samples were tested by RT-PCR for the presence of CECoV.

A low prevalence (2.8 per cent) of CECoV was found, with seven of the 249 samples being positive for the virus. Three positive samples were obtained from dogs in the same household. The four other positive results were from dogs from a wide geographical distribution, and three of these were shown to have had a history of diarrhoea in the previous month. Five of the dogs were aged six years or more, and the authors suggest that older dogs may play a role in the persistence of the virus in a population.

Sequencing of the virus showed all positive samples to be type I CECoV – the first report of this virus strain in the UK.

Veterinary Microbiology (2010) 140, 18-24
(doi: 10.1016/j.vetmic.2009.07.012)

doi: 10.1136/vr.c52

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Veterinary Record 2010 166: 54
doi: 10.1136/vr.c52

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