

When it's not just a dog: aspects of anaesthesia in retired greyhounds

Author : MICHAEL WATTS

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MICHAEL WATTS looks at the greyhound dog after it has hung up its racing jacket, and physical differences to similar-sized breeds to consider in anaesthesia

THE racing greyhound suffers from some injuries and illnesses in training that, to a significant degree, differ from those of pet dogs.

In contrast, retired greyhounds rehomed as pets, for the most part, share the same health problems as do pet dogs of other large breeds and, in most cases, injuries and conditions relating to their past careers are of lesser importance. Think of them as dogs, not greyhounds.

Veterinary care of companion, retired greyhounds is, therefore, well within the competence of any practising veterinary surgeon who regularly treats pet dogs. However, some aspects of greyhound health care need to be approached thoughtfully, such as general anaesthesia.

Physical differences

At the risk of stating the blindingly obvious, greyhounds look quite different from most other dog breeds. To be more scientific, they have a body surface area/volume ratio that is rather greater than more conventional breeds. As a consequence, they potentially lose body heat more rapidly.

They also have a low fat/ body mass ratio. In the general canine population this ratio is commonly in the region of 35 per cent, whereas in greyhounds and other sighthounds a figure of around 17

per cent is typical. Therefore, they are not as well-insulated as other dog breeds. These two characteristics render them vulnerable to hypothermia while under anaesthesia when normal thermoregulatory mechanisms are impaired.

Haematology

The normal haematological picture in greyhounds may differ markedly from that seen in conventional pet dogs. For example, erythrocyte counts in greyhounds are typically higher than in other dog breeds and this is reflected in higher haematocrit values.

Haemoglobin concentrations in greyhounds are also greater than in the general canine population. These high red cell counts are not solely related to training and persist in greyhounds many years after they last set foot on any track. In contrast, leucocyte counts are typically lower in greyhounds than in other dogs, with neutrophil counts, in particular, being notably low. Platelet counts are also typically low. The fact these differences are seen consistently in long-retired pet greyhounds suggests they are not simply a response to the stress of hard training in race dogs, but may be a genetic adaptation to exercise.

Thyroid function

Normal reference ranges for many biochemical parameters in greyhounds also differ from those seen in the wider canine population – perhaps most strikingly in the case of thyroid function tests. Total thyroxine (T4) and free T4 tend to show lower values in greyhounds than in other breeds, without reduced thyroid gland function. It is not that greyhounds have an inherent tendency to hypothyroidism, rather that the thyroid function tests – which have stood the test of time in general canine practice – are not good measures of thyroid function in greyhounds.

Clinically, normal greyhounds can have T4 values anywhere from what would be regarded as low normal levels in other breeds down to as low as zero, while their thyroid-stimulating hormone levels are normal. Levels of phosphate, potassium, ionised magnesium and ionised calcium in greyhounds are also lower than in other breeds, as are total globulin and haptoglobin.

Low levels of plasma proteins mean highly protein-bound anaesthetic agents, such as ketamine, which is approximately 50 per cent protein-bound, have more potent effects in greyhounds than in mixedbreed dogs when administered at the same dose rates. In contrast, levels of creatinine, sodium, chloride and bicarbonate are higher than in the general canine population, as are alanine aminotransferase (ALT) and aspartate aminotransferase (AST) levels. Greyhounds also tend to have higher glomerular filtration rates than dogs of other breeds.

Puppy training

The way greyhounds used for sport are customarily managed also differs from pet dogs. For example, it is normal for greyhound puppies to be reared “at liberty” – running loose in paddocks. Such youngsters receive limited handling and are often poorly socialised.

Some young greyhounds injured during rearing, or that perform poorly in early trials, may find themselves in search of a home as a pet. The transition from life in the trainer’s institutional kennels to life indoors as a family pet is a significant step. While it may seem initially, to the casual observer, a step on the road to a better life, it may not always be an easy one for the greyhound. When presented for veterinary treatment, juvenile greyhounds from this type of background are likely to be considerably stressed – not only by their original illness or injury, but also by the unfamiliar nature of their surroundings and their journey to the veterinary clinic. This is not the ideal prelude to the induction of general anaesthesia.

Further information on a range of topics relating to greyhound veterinary care and welfare can be found at www.greyhoundvets.co.uk

When the going gets tough, get going at the London Vet Show

THE Society of Greyhound Veterinarians (SGV) – the specialist division of the BVA dedicated to the veterinary care and welfare of the greyhound before, during and after its racing career – will present a seminar entitled “Getting going with greyhounds – an introduction to racing and retired greyhounds” at the London Vet Show.

Designed to appeal to veterinary surgeons and veterinary nurses who have little experience of greyhounds, but would like to broaden their skill base, the seminar will take place in the Association Rooms, Olympia, London on November 16 at 1pm. Attendees are also invited to visit the joint Society of Greyhound Veterinarians/Retired Greyhound Trust stand. For further details, contact Hazel Bentall (hazelbentall@gmail.com) or SGV secretary Michael Watts (editorsgvnewsletter@gmail.com), Society of Greyhound Veterinarians, 38 Manse Road, Kircubbin BT22 1DR, telephone 07968 792466.