

Monday Morning Quarterbacking

Ask Dr. Boyer

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As a long-time Contributing Editor to *Versatile Hunting Dog*, I often receive email inquiries about specific cases from owners. Usually, they have been to their veterinarian repeatedly and the issues have not been solved. They reach out and ask if I have any idea about what is going on with their dog. Since I don't have the benefit of an exam or records, I look at histories and make general recommendations. In the veterinary profession, it is easy to be a Monday Morning Quarterback when asked for a second opinion, as I have the benefit of all of the prior veterinarians' test results as well as a long history from the owner.

Last week I received an email from a member with an eight-year-old German Shorthaired Pointer who had pain while running, and when he arrived home, he would climb on the couch and cry. His owner has taken him for a full battery of tests including an MRI, X-rays, blood tests, ultrasound, neutering, a full orthopedic exam and multiple medications. Now, he has what the owner has described as "bloody urine" in association with his periods of exercise. The prior tests ruled out a prostate or urinary tract problem. The owner was very frustrated because this would be the third year he couldn't hunt his dog.

As I pondered this dog's problem, not only was I able to jump into my role as a Monday Morning Quarterback, I was able to offer a possible alternative diagnosis of "Monday Morning Disease."

In certain breeds of horses, Monday Morning Disease is also known as "tying-up" or exertional rhabdomyolysis. Exertional rhabdomyolysis is a muscle disease which causes generalized painful muscles, difficulty walking and changes in muscle enzymes due to cell damage. These horses often have dark, coffee colored urine which can be misidentified as bloody urine. Left untreated, kidney damage/failure can result and this disease could be fatal without proper management. This same syndrome is found in sled dogs, racing Greyhounds, bird dogs, coursing dogs and field trial competitors.

Exertional rhabdomyolysis is caused by one of two scenarios: (1) exercising an unfit dog or (2) a conditioned dog that is running above his normal activity level. In Greyhounds, it is known that being "high strung" or excitable prior to a race, or hot/humid weather in pre-race kenneling contributes to the development of



URINE FROM A DOG WITH EXERTIONAL RHABDOMYOLYSIS CONTAINING MYOGLOBIN, EXCRETED IN THE URINE DUE TO EXTREME MUSCLE CELL DAMAGE. MAY BE CONFUSED WITH BLOOD IN THE URINE.

the disease. We can extrapolate this information to see how this disease would appear in a hunting dog.

Our hunting partners are excited to go hunting. They will bark and pant a lot, especially if left crated in the back of the truck for a while. As the dog continues to bark and pant, the body loses carbon dioxide to panting. The kidneys start to compensate by excreting bicarbonate into the urine to lower the pH of the blood. As the dog exercises and builds lactic acid in the muscles, he cannot offset the buildup because the bicarbonate has already been excreted in the urine. The acid/base imbalance damages muscle cells. If conditions are hot or humid, the dog cannot lose excess body heat and pants more than normal, making the condition even worse. There is another mechanism in the body that will make a dog have a "subacute" or lesser form of this disease due to an imbalance of potassium which changes the blood flow in the body causing cellular damage.

Recognizing the early warning signs of this disease is important. If your dog changes his gait, slows down, starts showing tremors or weakness in the hind limbs, is tender to the touch or has a hunched appearance you need to act quickly. First, stop the exercise immediately and get your dog to an area to cool off. Feed your dog some food with carbohydrates (bread, pasta, rice, Karo syrup). If your dog does not quickly recover within 15 minutes, get to a vet as soon as possible for treatment. Pain management is important, however, DO NOT give any type of non-steroidal medication like Rimadyl, Metacam or Deramaxx for pain. Your veterinarian would likely prescribe an alternative medication that will not cause liver and kidney issues and will be effective until this subsides. Once at the veterinarian, your dog will receive IV fluids to restore the proper acid/base balance in the body and hydrate your dog. Fluid therapy will reduce the lactic acid in the muscles as well. Depending upon the severity, other medications and treatments may be recommended.

So what does this mean to a hunter? Is this disease preventable? If your dog has an episode is his hunting career over? In most cases, you can prevent your partner from being affected by this disease or at least

minimize the risk of its development. At the start of hunting season and frequently during hunting season, critically evaluate the fitness level of your dog. Pre-hunt season conditioning is important. Going from the couch to the field without proper conditioning can result in orthopedic injuries as well as exertional rhabdomyolysis. If your dog is in condition, give him adequate warm up and cool down periods. Do not let him go from the truck to "full throttle" without a bit of time at a light run. Use a long line or check cord for the first 15-20 minutes of the hunt to allow the body to adjust to the increased exercise load. Many of us hunt over a period of several hours or more. A typical dog hunting for two-three hours has an increased nutritional demand of at least twice the normal daily caloric intake. Like marathon runners who carb-load, giving some complex carbohydrates (pasta, bread) prior to and during hunting will also help assure that your dog has plenty of glucose and would be less likely to have to break down muscle for energy. I personally use a mixture of cooked white rice and Karo syrup which I carry in my vest in a resealable bag. It's easy for the dogs to eat during a rest stop and they love it.

You can also reduce the effects of lactic acid on the muscles by mixing a teaspoon of baking soda with a cup of yogurt as a mid-hunting snack if your dog will eat it, or even mix the baking soda into the rice/Karo syrup mixture.

There are research studies conducted in the sled dog population that demonstrate the importance of post exercise supplementation with carbohydrates. I recommend feeding your dog carbohydrates after the hunt if your dog hunted anywhere from 10 minutes to three hours, especially if you are going to hunt multiple days in a row.

In summary, exertional rhabdomyolysis is a serious, but preventable, disease that can affect performance dogs. Paying attention to preseason physical conditioning as well as nutritional needs during the hunting season can greatly reduce the chance of your hunting partner being "sacked" by a Monday Morning Quarterback. 🐾



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