Looking for Clues to Blindness

When 8-year-old golden retriever Sophie started walking into walls and having trouble finding the ball while playing fetch, her owner Meredith knew something was wrong with her beloved dog. A veterinary ophthalmologist diagnosed Sophie with Sudden Acquired Retinal Degeneration Syndrome (SARDS), a common cause of permanent blindness in dogs. Following that initial visit to her veterinarian, the disease rapidly took Sophie’s vision, completely blinding her within four weeks. There is currently no treatment or cure for SARDS, a devastating condition for dogs and their families.

SARDS was first discussed in veterinary medicine more than 30 years ago, but much remains to be discovered regarding its underlying cause. Dr. Sara Thomasy, an ophthalmologist and vision researcher with the school, wants to change that with a new clinical trial focused on better characterizing SARDS with hopes of identifying protein biomarkers and/or the genetic components of the disease.

An estimated 2,000 dogs a year are diagnosed with SARDS, a number Dr. Thomasy thinks may be conservative. The disease doesn’t discriminate, but most of its victims are middle aged, and more than 60 percent of them are female. Many owners report their dogs were lethargic before the diagnosis, and often had increased appetites and drinking habits, causing them to gain weight and urinate more. These factors point toward SARDS possibly being a systemic disease rather than an autoimmune disease randomly focused only on the retina. Dr. Thomasy is working with internal medicine specialists and neurologists to determine if that is the case.

The clinical trial will explore these and many other factors.

A retrospective study by UC Davis researchers, funded by the Center for Companion Animal Health, discovered that nearly 2-3 percent of dogs seen by the veterinary hospital’s Ophthalmology Service were eventually diagnosed with SARDS. While the disease can affect any breed, Dachshunds are overrepresented in that group, making up 20 percent. This leads Dr. Thomasy to believe that the breed may be genetically predisposed to SARDS. If the trial can determine a genetic mutation for this phenomenon, then a genetic test could be created and offered to breeders who could breed the disease out of the species.

As far as treatments for dogs afflicted with SARDS—that’s not an easy task currently.

“A great deal of preliminary work needs to be done to understand the disease better,” said Dr. Thomasy. “Until we understand it better, it’s hard to even begin to think about potential therapies. Hopefully, this trial is the beginning of determining a cause for SARDS, and eventually a treatment.”