

Brief History of Iris Sphincter Dysplasia in Dalmatians

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Review Of Previous Research:

Period 1991-1999:

- Veterinarian and Dalmatian breeder, Dr. Susanne Hughes was the first one to call the attention to a strange eye anomaly that occurs in some dogs. Dr. Hughes wrote a brief but very interesting article, [Ocular Abnormality In Dalmatians](#) which was published in *The Spotter* magazine. (Summer 1991, page 57) In this article, Dr. Hughes describes some of the symptoms of ISD and possible secondary problems that may result from it. She makes note of the fact that liver colored Dals seem to be more prone to ISD than blacks. Dr. Hughes states that it is likely that ISD has been present in the breed for a long time yet we know very little about it.
- In 1999 Dr. Hughes and Dr. Robert English, a veterinary ophthalmologist, evaluated approximately 80 Dalmatians and found that nearly 15% of the dogs tested had some degree of ISD.
- In that same year, 1999, Dr. Hughes organized an Eye Clinic at the National in Denver. A local veterinary ophthalmologist, Dr. Steven Roberts, examined 59 dogs and found 27% of them were affected to some degree.
- A team of veterinarians and ophthalmologists worked together to do a histopathological evaluation on the eyes of a litter of 6 Dalmatian puppies. The puppies were from a test mating done between a severely affected dam and a moderately affected sire. Though the official report has never been published, members of the team stated, in private communication with the Study Group on Eyes, that all the pups were affected to some degree. The iris sphincter muscles in the eyes were noticeably less well developed and partial iris thinning (hypoplasia) was also found.
- Some years ago, a veterinary ophthalmologist found signs of retinal degeneration (rod-cone degeneration, initially manifested as dim light or night blindness) in some ISD affected dogs from a tightly linebred population of Dalmatians.
- Evaluations have shown that some older ISD affected dogs have definite signs of some type of Progressive Retinal Atrophy (PRA).

Further research will be necessary to determine if dogs that are affected with Iris Sphincter Dysplasia are at greater risk of forming ultraviolet light induced cataracts, PRA or other retinal degeneration.

2002-DCA Study Group on Eyes is formed.

The aims of the Study Group with regard to ISD are:

Education

- Keep the Dalmatian fancy informed about the progress of ISD research.
- Develop educational material for breeders to reduce rate of ISD in the breed. This would include breeding strategies for dealing with affected and carrier dogs.

Statistics and General Data

- Determine the exact nature of the eye anomaly that has been reported in Dalmatians.
- Settle on a name for the condition. At present time, several names are used for this condition Iris Sphincter Dysplasia and Iris Hypoplasia being the most common.
- Develop a standard diagnostic test protocol.
- Develop recommendation for when and how often testing should be done.
- Set up a database for storing test results and/or work through the Canine Eye Registration Foundation (CERF).
- Determine the prevalence of ISD in the Dalmatian breed as a whole.
- Work with the American College of Veterinary Ophthalmologists (AVCO) and CERF to insure that testing for ISD is always done as part of a standard eye exam.
- Work with AVCO to determine if there are any reasons that ISD should be classified as a “no breeding” condition. Currently dogs affected with ISD are given a CERF registration number.

Genetics

- Determine the mode of inheritance for ISD.
- Study possible links between ISD and coat color, eye color and sex.
- Determine the average age of onset for ISD.
- Work with researchers to identify a genetic marker for ISD.
- Develop a DNA test for ISD if feasible.