

HEALTH REPORT

From Meeting held on 1st June 2014

1. GLAUCOMA

The following has been received from James Oliver to let you all know a bit more about the Study, which is going really well:

The Animal Health Trust's Research into Inherited Glaucoma in the Welsh Springer Spaniel: Progress Report May 2014

What is the background to the project?

The Welsh Springer Spaniel is one of 8 dog breeds currently certified as being affected by primary, inherited glaucoma under the BVA/ISDS/KC Eye Scheme. Glaucoma is a painful and blinding disease and treatment options are limited and often unsuccessful. It is conservatively estimated that at least 1500 dogs in the UK each year will be affected by this type of glaucoma – most of these need to have their eyes removed or, worse still, are put to sleep. Thus, the disease represents a significant welfare problem.

Inherited glaucoma in the Welsh Springer Spaniel is known to be associated with an abnormality in the drainage pathway of the eye. This abnormality is termed 'goniodysgenesis' (sometimes also referred to as 'pectinate ligament dysplasia') and is assessed by a veterinary ophthalmologist by gonioscopy which involves placing a contact lens on the eye before examining the 'drainage angle'. This test is most often performed as part of the BVA/KC/ISDS Eye Scheme as a 'one off' test before breeding. We now know, however, that goniodysgenesis can progress with age in some dogs and some Welsh Springer Spaniels, previously classed as unaffected, have gone on to develop goniodysgenesis and some of these have developed glaucoma and had to have eyes removed.

James Oliver (Senior Ophthalmologist at the AHT and BVA/KC/ISDS Eye Scheme panellist) and Cathryn Mellersh (Head of Canine Genetics at the AHT) have developed a project to look at the genetics of goniodysgenesis and glaucoma in multiple dog breeds including the Welsh Springer Spaniel. In addition, they will determine prevalence of the condition within the respective breeds and shed further light on the progressive nature of the condition.

How will the study be performed?

James and Cathryn have been attending dog shows to examine dogs for goniodysgenesis and to collect DNA samples, in the form of cheek swabs, from them. All of these examinations are performed free of charge. In addition, a very successful 'Welsh Springer Spaniel Day' was held at the Animal Health Trust on 28th March during which these examinations were performed along with the delivery of talks on canine genetics, the glaucoma study and canine epilepsy. Other veterinary surgeons within the UK and abroad are also contributing cheek swab samples to our project. Once cheek swabs have been collected, DNA must be extracted from them in the laboratory. The DNA of dogs affected with glaucoma and goniodysgenesis will then be compared to dogs free of these conditions to look for any differences between the DNA.

What are the inclusion criteria for the study?

Cheek swab samples are required from dogs that fall within the following 3 categories:

1. Those affected by primary, inherited glaucoma
2. Those affected by goniodysgenesis (as assessed by gonioscopy) without glaucoma
3. Those unaffected by goniodysgenesis (as assessed by gonioscopy). These dogs must be at least 5 years of age at the time of gonioscopy to allow for possible progression of the condition with age.

It is useful to examine dogs of any age and older dogs (5 years and above) are particularly useful. We also need to examine dogs that have previously been certified as unaffected by goniodysgenesis under the BVA/KC/ISDS Eye Scheme to help us to determine the progression of this condition.

What has been done so far?

To date, almost 200 Welsh Springer Spaniels have been examined and contributed cheek swab samples to

the project. These include 33 dogs affected with glaucoma and 61 dogs affected with goniodysgenesis alone. The remainder are currently free from both diseases. We have already looked at 12 candidate genes and, so far, 3 of these have revealed possible associations with goniodysgenesis and/or glaucoma and need to be looked at in more detail.

What needs to be done now?

We are now almost ready to progress to the next stage of the project. This will involve analysing the entire genetic code of each dog for which we have samples and comparing the results between the three groups.

Where is all this leading?

The ultimate goal of the project is to discover the mutation(s) responsible for goniodysgenesis and glaucoma. Once this has been done it should be relatively straight-forward to develop a DNA test. This will enable breeders to identify dogs which are likely to become affected by the conditions including those classed, at the time, as unaffected by gonioscopy, and also dogs that may never develop the conditions themselves but could pass them onto their offspring.

How much will this cost and where is the money coming from?

We anticipate that the project in the Welsh Springer Spaniel will ultimately cost £50,000-£60,000. The investigators are generously supported by the Animal Health Trust and by the Kennel Club, as part of the Kennel Club Genetics Centre at the Animal Health Trust. Most importantly, however, the investigators have received a large amount of funding from Dogs Trust. This generous support will support staffing costs for the entire project (to be conducted in multiple breeds over 6 years) as well as pay for transport to and from events to examine and sample dogs. However, there is currently a substantial deficit to the tune of £20,000 for laboratory consumables and the further laboratory tests required. This deficit will need to be fulfilled before the project can be moved to the next stage.

What can you do to help?

If you are aware of any dog that has been affected by glaucoma then please get in touch with James Oliver (James.Oliver@aht.org.uk) so that they can be included in the study. If you own any Welsh Springer Spaniels that have, as yet, not participated in the study then please come along to one of our future screening events. The next two screening events are:

Saturday 30th August 2014. WSSC Championship Show, Cricket Connexion, Ryton on Dunsmore (eye examinations kindly performed by Beverley Cottrell)

Sunday 14th September Welsh Springer Spaniel Club of South Wales Open.

Saturday 2nd November 2014. North of England WSS Open Show (venue details to follow)

If you cannot make these events, then, if possible, you would be welcome to visit James at the AHT in Newmarket, Suffolk for a free eye examination.

As always, we are grateful for any health updates you can give us on those dogs for which we currently hold DNA samples.

Confidentiality

All information about dogs included in the study, and their owners, is kept in complete confidence and will not be shared with anyone who does not work at the AHT

Acknowledgements

We would like to thank all owners who have submitted samples and information from their dogs – without either of these we would be unable to make any progress with this project. We also thank all participating veterinary ophthalmologists for their continued support and advice.

The following was received following the first Eye screening which took place at the SEWSSC Open Show in May:

“We would like to sincerely thank all the Welsh Springer Spaniel owners who volunteered their dogs for eye testing and DNA collection on Sunday 26th January as part of a research project we are undertaking at the Animal Health Trust. The aim of the project, which is supported by Dogs Trust, is

to improve our understanding of the genetics of goniodysgenesis/primary glaucoma in the WSS and other breeds and to develop a DNA test that breeders can use to reduce the prevalence of this painful and blinding condition. The eye examinations were undertaken free of charge to encourage as many owners as possible to contribute to the study, and we received no payment for our attendance at the event which was performed in our own free time.

During the day we examined the eyes of and collected DNA from 47 dogs. The opportunity to examine and sample so many dogs, many of which had been examined previously, provided invaluable data regarding the prevalence and progression of goniodysgenesis in this breed.

We received many other positive and encouraging comments on the day, and many words of appreciation for the research we are doing to help the Welsh Springer Spaniel. We would like to sincerely thank the SEWSS Club and WSS Joint Health Group for their help leading up to and on the day of eye testing itself. In particular, our sincere gratitude goes to Julie Revill, whose organisation skills ensured that the day ran extremely smoothly considering the unprecedented numbers of dogs that were voluntarily offered for examination. We hope that Julie's obvious tireless dedication to the breed will serve as a leading example to other Club members who perhaps one day themselves will consider making a similar positive contribution to the health and welfare of the breed.

We are very happy to answer any questions about the research and encourage owners to contact us for more information if they would like to do so."

Cathryn Mellersh contacted the JHG Secretary asking if the Group would be prepared to support their application for a Grant for the Glaucoma Study from the USA, these are called ACORNS and could allow them to receive up to a value of \$12,000 + 8% overheads. The JHG agreed that the Secretary should send a letter of support to Cathryn for use with her claim.

2. WSS DAY AT AHT

At the WSS Day at the AHT HELD ON 28TH March 2014 we were informed that in the last few screening sessions (which included around 100 dogs) some other conditions were been found in WSS eyes :

4 dogs with MRD

3 with Corneal Dystrophy

2 with Retinal Degeneration

3. USE OF OVERSEAS SIRES

Discussion took place with regard to the use of overseas dogs. The JHG does have a official reciprocating agreement with the Dutch Club, through Marianne Van Dommelan marianvd@hetnet.nl who would be able to give health information on Dutch bred dogs. It was also suggested that Breeders should consider contacting the Breed Club(s) in the Countries from which they are importing dogs or semen, to ensure they are fully aware of health status in that Country.

4. FITTING

Seminar bookings are coming in well, for 7th December 2014, so if you want to attend, please contact Julie on julita@furzelands.demon.co.uk as soon as possible. £20 for the day with a two course lunch. It has been mentioned that some are not aware of the Speaker for this day so here are his full credentials:

Laurent S. Garosi DVM, Dip ECVN, MRCVS

RCVS & European Specialist in Veterinary Neurology

President European College of Veterinary Neurology

Director & Head of Neurology/Neurosurgery

Davies Veterinary Specialists
Manor Farm Business Park
Higham Gobion

There have been two further Fitting dogs reported, completed questionnaires have been received from the Owners.

Julie Revill
Secretary
WSS Joint Health Group