Ask Dr. OES

A Column from the Health and Research Committee

Send your questions to oeshealth@gmail.com.

Dear Dr. OES,

My older dog is getting weak in the rear end. Should I do the genetic test for Degenerative Myelopathy (DM)?

Worried in What Cheer, IN

Dear Worried,

You are correct that there is a genetic test for Degenerative Myelopathy, but current research from the University of Missouri has not shown DM to occur in OES.

The signs of hind end weakening in Old English Sheepdogs are often due to arthritis in the lower back. While no one wants to hear their dog has a medical problem, at least there are medications to treat arthritis such as NSAIDs (nonsteroidal anti-inflammatory drugs), and pain relievers such as Gabapentin.

Well, what is Degenerative Myelopathy anyway?

DM is a horrible disease characterized by gradual paralysis of the hind end. Usually occurring in dogs 8 years of age and older, the disease progresses quickly over 6 months to one year. The dog initially loses coordination of his hind legs which results in paralysis, then urinary and fecal incontinence. (www.ofa.org)

In DM, the white matter of the spinal cord and peripheral nerves deteriorate. The white matter contains fibers which transmit movement and sensory information from the brain to the legs. DM is similar to ALS in humans. [1]

Currently, diagnosing DM is basically just ruling out everything else first. An advanced MRI technique called diffusion tensor imaging is being studied by Dr. Philippa Johnson at Cornell University as a diagnostic tool, funded by a grant from the Morris Animal Foundation. (www.johnsonlabcornell.com)

Dr. OES

1. Awano T, Johnson GS, Wade CM, Katz ML, Johnson GC, Taylor JF, Perloski M, Biagi T, Baranowska I, Long S, March PA, Olby NJ, Shelton GD, Khan S, O'Brien DP, Lindblad-Toh K, Coates JR. Genome-wide association analysis reveals a SOD1 mutation in canine degenerative myelopathy that resembles amyotrophic lateral sclerosis. Proc Natl Acad Sci U S A. 2009 Feb 24; 106(8):2794-9. [PubMed: 19188595]

Dear Dr. OES,

What genetic testing should be done on my dogs? How do I register with CHIC?

George in Monkeys Eyebrow, KY

Dear George,

Not all the genetic tests recommended by OESCA are required for CHIC registration, although they are still important and should be done.

- **Genetic Testing:**

The genetic tests for Old English Sheepdogs currently recommended by OESCA are listed below:

1. Exercise Induced Collapse (EIC)
2. Multiple Drug Sensitivity (MDR1)
3. Cerebellar Degeneration (CD)
4. Primary Ciliary Dyskinesia (PCD)

Although there are other genetic tests available (often sold as package deals), many are not breed specific to OES and may give unwanted and invalidated results. The lab results must be interpreted with caution by knowledgeable veterinarians. Be sure to choose an approved laboratory for the testing. OFA has a list on their website. You can contact the HRC or OFA if you have any questions.

- **CHIC (Canine Health Information Center) Registration:**

The testing **<u>requirements</u>** for CHIC registration for Old English Sheepdogs:

- Hip Dysplasia by either OFA or PennHIP Evaluation
- Eye Exam by a board certified ophthalmologist every year until 5 years of age (then every 2 years)
- Autoimmune thyroiditis every year until 5 years of age (then every 2 years)
- Exercise Induced Collapse
- Must be permanently identified (microchip/tattoo)

Five **<u>optional</u>** tests are also listed on the OFA website.

- Cardiac evalution by a cardiologist (congenital and advanced cardiac exam)
- Congenital Deafness based on BAER test
- Multiple Drug Sensitivity (MDR1) DNA test
- Cerebellar Degeneration (CD) DNA test
- Primary Ciliary Dyskinesia (PCD) DNA test

Once test results are submitted to OFA and fulfill the breed specific requirements, <u>and</u> when the owner has agreed to make those results public, a CHIC number will be issued.

A CHIC number only means that all the required tests have been done and that the results are available to the public. It does not necessarily mean that the dog is clear of tested diseases/disorders. (www.ofa.org)

Dr. OES