American Brussels Griffon Association

HEALTH TOPIC: Syringomyelia – a Health Risk affecting Brussels Griffons

Presented by: The ABGA Health Committee

There is a "newly" diagnosable hereditary problem in the Brussels Griffon breed that maybe of growing concern and should merit monitoring by breeders of Brussels Griffons. Though symptoms may be easily unnoticeable in some dogs other dogs are quite affected and vary in the way the "outward" symptoms show. The disease is Syringomyelia (SM). Syringomyelia is a condition whereby fluid filled cavities develop within the spinal cord. Some refer to SM as "neck scratcher's disease" because scratching in the air near the neck is a common symptom. In fact, this symptom is the most common "tell-tail" and seen when in a new environment. For example, neck scratching tendencies may become more pronounced at a dog show or when a dog is in a stressful situation. Often dogs that are affected are mistakenly tested for allergies or an injury to the neck area. It is often difficult to initially recognize SM symptoms as they vary from dog to dog in the way the symptoms manifest themselves. Predominant SM symptoms are: neck scratching, random screams due to pain, increases aggressive behavior mainly toward other dogs, seizures to name few signs but other will be described later.

There are 2 major research Institutes specializing in SM and collecting "Phenotype" or pedigree information to track the genetic path that this issue is taking in each breed that they learn is affected. In England, Dr. Clare Rusbridge of the Stone Lion Veterinary Centre has spearheaded the efforts world-wide to collect information from dog owners that are willing to share the confidential medical data of their dog that has been diagnosed with SM. Test information in North American is being channelled to specialist, Dr. Guy A. Rouleau who is based in Canada with the Center for the Study of Brain Diseases. There is considerable information about the disease that currently permeates 80% of the Cavalier King Charles Spaniel breed. Needless to say breeders of Cavaliers are dealing with this on a global level and therefore their websites tend to be very informative.

The discovery of this type of health risk makes it important to unite and to share with each other the symptoms, signs and conditions that each of us as breeders have seen, experienced or have heard about but were unexplainable at the time or went undiagnosed. One may see shoulder scratching, neck pain, curving of the spine (scoliosis), soreness of a front or rear leg, limping or weakness of a limb. The other interesting issue is that often the ailments or signs are not noticeable until the dog is three or four. Of course some dogs show signs at earlier ages but more commonly the symptoms are not evident until the dog is around three years of age or older.

Interestingly enough, in the last ABGA Health Report there were no incidents or conditions of SM indicated any breeders as unidentifiable by their veterinarians. This

most like due to the fact that SM is only just now becoming a recognizable and a diagnosable condition (diagnosable only with an MRI) by veterinarians.

Being silent and passive at this point could lead to awful ramifications for our breed world-wide. Therefore, with this discovery it would be irresponsible to let this problem continue undisclosed to Brussels Griffon breeders and if diagnosed undocumented as our breed shares a relatively small gene pool, so if we are discovering SM in our breed world wide this disease most certainly is a concern to be aware of and dealt with. This genetically inherited problem, in the Brussels Griffon breed, may have many genetic carriers and affect dogs that are currently undiagnosed and being breed. This will stay that way unless we instigate some discussion and awareness about the vagaries of the symptoms.

Currently it is an ethical and moral responsibility of the ABGA Health Committee to increase awareness in order to help our breed and breeders. With this in mind, the ABGA Health Committee is presenting this concerning new health issue to its membership to encourage awareness levels about SM, share information sources and disclose the harming potential SM has to affect our breed should this go undisclosed.

Two purebred Brussels Griffons have recently been diagnosed with this genetic "disease" and several top breeders are aware of seeing symptomatic dogs over the course of time. If the breeders of Brussels Griffon take this seriously it may be possible to save our breed from the issue that is currently occurring with the Cavalier King Charles Spaniels breed. The fundraising and research spearheaded by the Cavalier Health Foundation has been very aggressive to help develop testing/screening/diagnostic techniques. To learn more about SM, a great website to visit is the UK Cavalier site at: http://cavalierhealthfoundation.com/syringomyelia.htm

How do I know if my dog has Syringomyelia?
The only way to confirm a diagnosis is by **MRI** (Magnetic Resonance imaging). This is essentially a picture of the water content of the body presented in a series of slices (like a loaf of bread). Nervous tissue, which contains a lot of water, is not imaged by x-rays but is shown in great detail by MRI. The syringomyelia can be easily visualized as a pocket of fluid within the spinal cord. In severe cases the syrinx is so wide that only a thin rim of spinal cord remains.

The worst thing is that a non symptomatic and non affected dog can still be a carrier, and so far there is no test for this. Dr Clare Rusbridge and her team are working on determining a genetic marker. Let's hope for the best, but perhaps we can learn as much as we can now to reduce the danger to our breeding programs.

Medical management
Long-term studies of medical management of Syringomyelia are not available yet. The drugs used to treat Syringomyelia can be divided into 3 types:

- **analgesics**;
- **drugs which reduce CSF production**;
- **corticosteroids**.

Analgesics
Pain in mild cases may be controlled by non steroidal anti-inflammatory drugs (**NSAIDs**) e.g. Rimadyl and Metacam. In more severe cases anticonvulsants, which have a neuromodulatory effect on hyperexcitable damaged nervous system, may be useful, for example **gabapentin** (Neurontin Pfizer; dose rate 10-20mg/kg BID/TID – these are not licensed for dogs). Oral opioids, e.g. **pethidine** or **methadone** are also an alternative.

Drugs which reduce CSF production
Proton pump inhibitors such as **omeprazole** (Losec or Prilosec) can inhibit cerebrospinal fluid formation and therefore may be valuable; clinical data on their use and effectiveness for SM is currently lacking. This drug is unlikely to be useful in the long term as therapy longer than 8 weeks duration is not recommended as this may increase the risk for stomach cancer. Carbonic anhydrase inhibitors such as **acetazolamide** (Diamox; Lederle laboratories) also decrease CSF flow and may also be helpful in treating syringomyelia although adverse effects of abdominal pain, lethargy and weakness may limit long term use

Corticosteroids
Corticosteroids are very effective in reducing both pain and neurological deficits although the exact mechanism is not known. It has been suggested that these drugs reduce CSF pressure however laboratory evidence of this is lacking. They possibly have a direct effect on pain mediators such as substance P. Although corticosteroids may be effective in limiting the signs and progression, most dogs require continuous therapy and subsequently develop the concomitant side effects of immunosuppression, weight gain and skin changes. If there is no alternative then the lowest possible dose that can control signs is used. Alternate day therapy is preferred. The author starts with 0.5mg/kg **prednisolone** / **methylprednisolone** daily.

Should you have questions or information to share you are welcome to contact:

Mark Grigalunas (212)695-6022 or Meg Prior (818) 888-0557

On behalf of the ABGA and the ABGA Health Committee, Meg Prior is the first person to author an article on Syringomyelia as related to the Brussels Griffon breed. Meg recognized the first diagnosed Syringomyelia case in the Brussels Griffon breed and is involved in a continuing effort to learn and disseminate current information about this genetically inheritable condition that affects Brussels Griffons world-wide. Meg received a Masters of Science Degree in Exercise Physiology from California Polytechnic State University, San Luis Obispo in 1991. If you have questions or require a more in-depth explanation of Syringomyelia please contact either Meg Prior at: (818)888-0557 or the ABGA Health Committee Director, Mark Grigalunas at: (212) 695-6022.

Mark Grigalunas is the Chairman of the Health Committee for the ABGA. He has been researching Cataracts and Progressive Retinal Atrophy within the Brussels Griffon for the past 6 years. Mark executed the first Puppy Mortality Survey and the most recent Health Survey for the Brussels Griffon.