

Steroid Responsive Meningitis

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The condition is seen in other breeds of dog too but Beagles along with Bernese Mountain Dogs, Duck Tolling Retrievers and Springer Spaniels seem to be over-represented in the canine population. It is primarily a disease of the younger dog, most often being seen around 6-8months of age for the first time although it has been seen as young as 10 weeks and in dogs of up to 2 years. However there is a form in older dogs more often called Granulomatous Meningo-Encephalitis or GME. SRM is more likely to be treatable with GME sometimes being refractory to treatment and more likely to result in a dog that doesn't respond well to treatment.

The cause of SRM is unknown at the moment. It is known to be an immune response but the trigger has not been identified. The immune response results in an intense inflammation of the blood vessels supplying the neurological system particularly the meninges (lining around the brain) and the cervical spinal cord (neck). The body is "attacking" its own cells and suppression of this is imperative in treatment.

The symptoms seen reflect the pain produced in the head and neck area and most commonly dogs present with a stiff gait, reluctance to eat and drink, lethargy and pyrexia (raised temperature). Beagles are very stoic and as such the owner may not be able to pinpoint initially exactly what is wrong just that the puppy is out of sorts. Often this is initially attributed to an injury since Beagles are generally lively and some affected dogs may cry out in pain. However the usual use of non-steroidal anti-inflammatories such as meloxicam and carprofen does not produce any improvement. There is no infectious cause so anti-biotics do not work either.

Diagnosis is most commonly based on symptoms and a spinal tap. Samples are taken under a General Anaesthetic from the fluid bathing the cervical spinal cord and they show typical changes of increased numbers of cells and protein. The recent use of the Magnetic Resonance Imaging technique (MRI) is also producing very useful information on the condition, giving an idea of the severity of the disease in an individual and helping to decide on the best treatment regime. Some dogs may have an apparently normal spinal tap but the MRI scans show abnormalities consistent with the inflammation within the brain. MRI scans have the advantage of being completely safe although expensive. The spinal tap although much cheaper runs a small risk of herniation of the hind brain into the spinal canal. This means the brain can move backwards into the space caused by removing some fluid causing pain and sometimes seizing. Ideally both diagnostics should be carried out.

Initial treatment regimes are based on suppressing the immune response that has caused the problem. Steroids usually prednisolone at an immuno-suppressive dose are used and then the dose tapered down. The course is ideally carried on for a number of weeks with a slow tapering down and increasing the dose back up with any recurrence in symptoms. A short course of anti-biotics is usually given after the spinal tap. A new and very useful treatment is a drug known as cytarabine. More commonly used in chemotherapy this drug is proving a very effective treatment for SRM. It is an injection and initially given intravenously but can be given under the skin at a later stage. The side effects are uncommon and it can be given easily in consultations at the vet. It produces a quicker response and at the moment seems to be resulting in less relapses than using steroids alone.

Given that some breeds of dog are over represented in the population with SRM there is a possibility of a genetic predisposition that basically means the Beagle (and others) may have a hereditary problem that makes them more likely to develop the disease. The availability of DNA marker tests for screening of canine disease is a major research area. The main institute in the UK that is developing these marker tests is the Animal Health Trust. We have been collecting DNA samples from affected dogs and their close relatives and the AHT are currently analysing these.

The first analysis run is not conclusive and we need more samples from affected beagles. The DNA is collected using a simple cheek swab brush and can be done by your vet or yourself. Instructions come with the kit. It is essential that such samples include a health report on the dog in question as knowing the DNA has come from an affected dog means those are marked as ones which could show differences. This disease is not new as I have had people describe the symptoms shown by dogs in the past that suggest SRM, but I am having a larger number of reports of it occurring in the last few years. We have a real chance with new technology to make sure SRM doesn't become a major issue in the Beagle. The gene pool is smaller than in the past as less people keep male dogs for use at stud and people are more likely to travel to use a major sire. The Beagle is a healthy breed but the Internet means people are more aware of any issues when they buy a puppy and finding out if there is any way of avoiding breeding puppies with SRM should be a major priority.

Anyone having a Beagle with the condition or knowing of one is encouraged to contact me by email samgoldberg@btinternet.com. I can pass on kits and information for sample collection and a report for the breed health monitoring. DNA samples can be collected at any time for the DNA study and don't need to be during a bout of illness.

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