Granulomatous Meningoencephalitis (Inflammatory Reticulosis) in Dogs

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Granulomatous Meningoencephalitis is also known as GME or Inflammatory Reticulosis. It is an inflammatory disease of the central nervous system (brain and spinal cord). The cause of this disease is unknown; it may be a condition with multiple causes. Some pets have what appear to be neoplastic (cancer) cells associated with the lesions, as well as inflammatory cells, but other pets do not.

GME is more common in dogs than cats. It is the most common inflammatory disease of the dog’s nervous system after canine distemper. It tends to occur more often in female, toy breed dogs although the reason is unknown. It is mostly a disease of young to middle-aged dogs (1-8 years) but may occur at any age. The onset of symptoms is usually rapid. Without treatment, the disease usually progresses to death within several months.

Types

There are three types of GME. The first is the ocular form. This is a relatively uncommon form. The animal has sudden loss in vision in the affected eye(s). Various parts of the eye may be affected. This form of the disease may remain unchanged for months before other symptoms are seen when the disease spreads into the central nervous system. The second type is the focal form. Based on the symptoms, it may appear to affect only one or two areas of the brain, but on examination, the lesions are located throughout the brain. This form may be partially responsive to medications for a time. The third type is the disseminated form. This is the most rapidly progressive with the lesions appearing throughout the nervous system. The symptoms depend on where the lesions occur.

Symptoms

Depending on where the lesions are located, symptoms may include neck pain, a rigid stance, reluctance to move, muscle spasms along the spine, loss of function of limbs, fever, and loss of vision.

Treatment

Treatment consists of administering immunosuppressive drugs such as steroids, radiation therapy, or a combination of the two. Therapy will not cure the disease but may cause remission for a time.

Diagnosis

The diagnosis of GME can only be confirmed by brain biopsy or post-mortem microscopic examination of the brain tissue. A tentative diagnosis can be made by an examination of the cerebral spinal fluid (CSF tap). This should be done before steroids are administered since they will normalize the CSF. Since other diseases can cause the same symptoms, veterinarians will examine and culture the CSF to look for other diseases.

Much research remains to be done on GME. Hopefully, as more information on the cause and progression of the disease is discovered, a more successful treatment can be found.