



STERIOD-RESPONSIVE MENINGITIS ARTERITIS

What is SRMA?

Steroid-responsive meningitis arteritis (SRMA) is a condition in which the meninges (the thick covering of the brain and spinal cord) and the arteries get inflamed. This normally affects the cervical area (neck), and presents with pain, fever and malaise. Rarely, it can become a systemic condition and cause inflammation in other organs.

What causes SRMA?

SRMA is an abnormal inflammatory reaction that occurs in dogs. The cause of the immune system reaction is unknown. Some theories have been explored, like vaccinations or environmental allergens, but these haven't been found to cause SRMA. The only reliable factor that has been identified is breed predisposition. Since there are breeds that suffer from SRMA more commonly than others, a hereditary/genetic component may exist, but it has not been found yet.

What are the clinical signs?

This condition presents in two forms: one is acute, with sudden pain, fever and malaise, and the other is chronic. The acute form is more readily recognised as it follows a typical pattern and is more common than the chronic one.

SRMA usually presents in dogs younger than 2 years old. Certain breeds like Beagles, Bernese Mountain dogs, Boxers, Golden Retriever and Nova Scotia duck tolling retrievers suffer from it more frequently than others.

- + Acute form: pain, commonly severe neck pain, with dogs showing a stiff neck and reluctance to move the neck/head up, down or to the sides. The dog's age is normally between 6 and 18 months. Oftentimes they will run a fever and might be off their food. If the neck is manipulated, they might scream.
- + Chronic form: duller, less severe pain that can be waxing and waning for weeks, not as limiting as the acute form. These dogs can present with neurological deficits as well, when the inflammation is affecting the spinal cord. Signs can appear as difficulty walking, like dragging or crossing their feet.

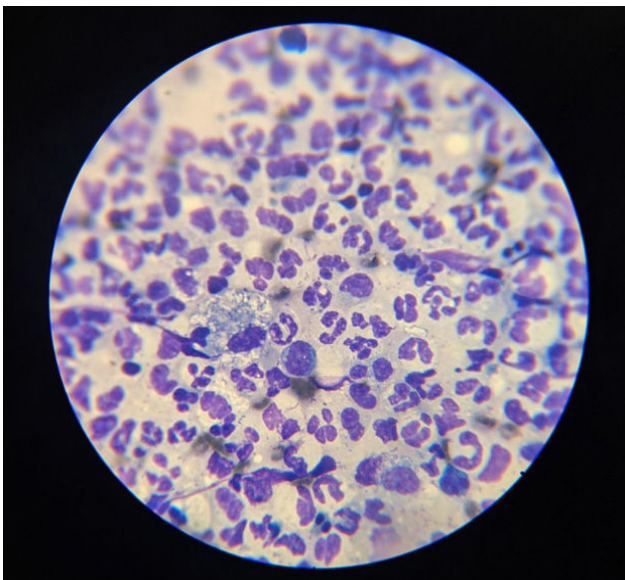
As it is a systemic reaction, other organs can be affected as well, like multiple joints (polyarthritis), the heart muscle (myocarditis) or the thyroid gland.

How can SRMA be diagnosed?

Your vet will perform a complete physical and neurological examination. With this information, a clinical suspicion for SRMA may be raised. Dogs with SRMA most typically have a normal physical and neurological examination, except for the fever, neck pain or stiff gait. Less commonly, there might be other findings.

The clinical suspicion is supported by the following tests:

- + Comprehensive blood tests usually show inflammation. Including an inflammatory marker (C reactive protein, IgA) can be helpful.
- + Advanced imaging (CT or MRI scan) of the painful area, most commonly, the cervical area. This is recommended to rule out other differentials, such as an infection or a slipped disc.
- + Cerebro-spinal fluid analysis is the most specific (the most accurate) test for this condition, as the cell population is quite characteristic for this condition. In the majority of cases, this will comprise of a very high proportion of neutrophils with no associated infection.



Picture showing the increased cellularity in the cerebro-spinal fluid. Image courtesy of Dr Crespo.

Can SRMA be treated?

Yes, and often quite successfully in the acute form. As it is included in the name, steroids are the mainstream therapy for this condition.

In some dogs, the clinical signs may resolve on their own, without therapy. In these cases, it is common that the pain relapses after a few days or weeks.

In dogs with mild clinical signs, non-steroidal anti-inflammatories can be successful at treating this condition.

The treatment with steroids is aimed at immunosuppression (dampening the immune response) to control the inflammation and analgesia (painkillers) to ease the pain. A combination of medications might be needed for your dog to be comfortable.

The treatment lasts for a few months, and it shouldn't be changed or stopped without your neurologist's advice.

In chronic cases, a second immunosuppressant might be recommended.

What is the prognosis?

Prognosis is generally good for the acute form. Following the correct course of treatment is usually successful in resolving the problem and preventing relapses. Relapses are seen in about 20% of cases, in a 2-year period after finishing treatment, but commonly within the first month.

Repeat cerebro-spinal fluid analysis and blood tests can aid in guiding the progression and response to treatment. This is particularly useful in cases of suspected relapse. Some indicators of inflammation may remain high despite successful clinical treatment.

A poorly controlled or difficult to control SRMA can become a chronic problem, with waxing and waning fever, lethargy, pain and possibly other neurological signs. A chronic SRMA can be more difficult to manage, with higher rates of relapse.

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