

Masticatory Myositis

BASIC INFORMATION

Description

Masticatory myositis is inflammation of the muscles of the head that are used for chewing (mastication). These muscles include the temporalis muscles, which are located in the forehead region above and beside the eyes, and the masseter muscles, which are located in the cheek area.

The inflammation may be sudden in onset (acute) or chronic. It usually affects large-breed dogs. Other names for this disease are *eosinophilic myositis*, *atrophic myositis*, and *masticatory myopathy*.

Causes

Masticatory myositis is an immune-mediated disease. The dog's own immune system attacks various components of the muscles. This group of muscles has a unique origin in the embryo and is different (contains type 2 M muscle fibers) from other skeletal muscles. This difference may explain why only these muscles become inflamed.

Clinical Signs

Acute myositis usually causes symmetrical swelling and pain of the muscles. If the muscles become terribly swollen, one or both eyes may bulge. Rarely, this bulging may result in permanent damage to the eye and blindness. The dog may be in pain and reluctant to open the mouth. Fever, lethargy, decreased appetite, and enlargement of nearby lymph nodes (glands) may also occur. Signs may last 2-3 weeks.

With the chronic form of the disease, the muscles shrink (atrophy) and become scarred (fibrosis). Fibrosis prevents the muscles from working well, and the dog may not be able to voluntarily open its mouth. Scarring can be so severe that the mouth becomes locked in one position and cannot easily be manually opened. These dogs have difficulty taking in food and may lose weight. Shrinkage of the muscles may allow the eyes to rest deeper in the socket than normal (enophthalmos).

Diagnostic Tests

Clinical evidence of painful swelling of the masticatory muscles in a large-breed dog may allow a tentative diagnosis. Laboratory tests may be performed to rule out infection and to look for evidence of increased eosinophils (a type of white blood cell) in the blood. Muscle enzyme levels in the blood may also be elevated. A specific test exists for this disease that detects type 2 M antibodies in the blood. Samples are sent to an outside laboratory, and results take several days to return.



X-rays of the head may be recommended to rule out problems with the bones and joints of the skull and jaw. A biopsy of the muscles may also be done and usually identifies both acute and chronic changes in the muscles. Occasionally, electrodiagnostic tests are performed on the muscles and other immunologic laboratory tests are submitted.

TREATMENT AND FOLLOW-UP

Treatment Options

Because this is an immune-mediated disease, therapy is designed to suppress the immune reaction. Steroids, such as prednisone, are started at high doses for 2-4 weeks and then slowly tapered over several months. Other immune-suppressive drugs may be added if the disease does not respond well to the prednisone, if the dog does not tolerate side effects of the prednisone, or if the signs return as the prednisone is decreased. Immune-suppressive drugs that may be considered include azathioprine, cyclophosphamide, and cyclosporine.

If the dog cannot eat, a feeding tube may be inserted. If the dog cannot open its mouth very far, then the mouth may be manually forced open with the animal under general anesthesia. Fracture of the jaw is a potential side effect of this procedure.

Follow-up Care

Frequent examinations are needed initially to monitor muscle swelling, ability to open the mouth and chew food, and any loss in body weight. High doses of prednisone may cause increased appetite, thirst, and urination, and urinary accidents in the house.

Laboratory tests are often repeated periodically to check for adverse effects on the blood and liver from the prednisone and other immunosuppressive drugs. Modifications may be needed in the therapy if side effects occur. Therapy is usually required for weeks to months.

Prognosis

Prognosis is best when the disease is diagnosed in the acute phase and aggressive therapy is started. Excessive scarring of the muscles that causes an inability to open the mouth has a poorer prognosis. Once muscles have atrophied (shrunk), they rarely return to a normal size or shape. In these cases, the bones of the head may remain very prominent.