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Reactive Histiocytosis

Transmission/cause: Reactive histiocytosis is due to an immune-mediated proliferation of a type of white blood cell called histiocytic or dendritic cells which normally occur in the skin. These cells are integral to the normal function of the immune system, and reactive histiocytosis is considered to be an aberrant immune response to an unknown stimulation of the immune system. There are two forms of reactive histiocytosis: cutaneous, which is confined solely to the skin, and systemic, which can involves skin, eyelids, nasal mucosa, lymph nodes, and internal organs.

Affected animals: Although any breed of dog can be affected, histiocytosis can tend to affect certain breeds more than others. In cutaneous histiocytosis, Collies and shelties may be predisposed, but no age or sex predilection is noted. In systemic histiocytosis, Bernese Mountain dogs between 2 to 8 years of age appear to be predisposed, but numerous other breeds of dogs have also been affected, including Rottweilers, Golden and Labrador retrievers, and others.

Clinical signs: The clinical signs vary according to the type of histiocytosis.

Cutaneous histiocytosis: Lesions typically are multiple, red plaques or nodules that occur anywhere on the body. Nodules may be ulcerated, but are not usually painful or itchy. Some dogs have lesions that remain confined to the nose, resulting in a "clown-nose" appearance. Nodules may wax and wane, or regress and then appear elsewhere on the body.

Systemic histiocytosis: Clinical signs vary with the severity of the disease. The cutaneous signs can be very similar to cutaneous histiocytosis, but nodules can involve the eyelids and nasal mucosa as well. There are often systemic signs, which may include decreased appetite, weight loss, and enlarged lymph nodes. The course can vary and signs may wax and wane, or be rapidly progressive and fatal. Some affected animals have nodules that affect various internal organs, especially the lung, liver, spleen, and bone marrow.

Diagnosis: Diagnosis of any of these forms is based on biopsy with histopathology. Special stains or cultures may be required to rule out infectious causes of inflammatory skin nodules. Since histopathologic findings of cutaneous and systemic histiocytosis are identical, abdominal ultrasound is helpful in determining if there is internal involvement indicative of systemic histiocytosis.

Treatment:

Cutaneous histiocytosis: Large doses of steroids are generally effective in inducing remission. Adjunctive therapies such as azathioprine, tetracycline/niacinamide combination, or cyclosporin are helpful in decreasing the need for high doses of steroids. In some dogs, immunosuppressive therapy can slowly be decreased over several months and eventually stopped, but in most cases intermittent or continuous therapy is necessary to maintain remission. A recent article reported the use of milder immunomodulating medications such as tetracycline/niacinamide as helpful to maintain remission in many dogs with cutaneous histiocytosis, although dogs with nasal lesions usually required stronger therapy for control.

Systemic histiocytosis: The treatment of choice is immunosuppressive therapy with oral cyclosporine or leflunomide; lifelong treatment is usually required to maintain remission.

Prognosis: The prognosis is dependent upon the type of histiocytosis diagnosed. Cutaneous histiocytosis has a fair to good prognosis, although relapses may occur. Systemic histiocytosis is a progressive disease which eventually requires continuous immunosuppressive therapy for control.