

Ettinger & Feldman – Textbook of Veterinary Internal Medicine

Client Information Sheet

Canine Demodicosis
Catherine A. Outerbridge

What is demodicosis?

Canine demodicosis is also known as *demodectic mange* or *red mange*. It is a skin disease caused by the mite *Demodex canis*, a mite that lives deep within the hair follicle. This mite is a normal inhabitant of dog skin but is typically only present in extremely small numbers. Demodex mites are species specific and are *not* contagious to other animals or humans. Other mammalian species (including humans!) have their own demodex mites that can be found in small numbers in normal skin. In some dogs an increase in the number of mites can occur and the increased mite population can cause skin disease.

Two forms of canine demodicosis exist:

- **Localized demodicosis** involves fewer than five lesions over the body. Often this form resolves on its own or with local therapy. This is the form most often seen in puppies.
- **Generalized demodicosis** involves five or more lesions or may involve one or two large areas of infection (i.e., over the face and muzzle area or involving two or more feet). Generalized demodicosis can become a severe chronic disease. Unless a correctable underlying cause can be found, lifelong treatment is sometimes necessary. Secondary bacterial skin infection (pyoderma) is often present which complicates the disease.

Currently we do not know all the reasons that “trigger” the overpopulation of mites in the skin of dogs with demodicosis. In newborn puppies transmission of the demodex mite is thought to occur from the bitch to the nursing puppies. In most puppies the immune system keeps the mite population under control. Some young dogs and puppies will develop focal, localized areas of demodicosis. The juvenile onset of localized demodicosis will typically resolve without therapy as the dog’s immune system matures and the pup becomes able to control the mite numbers in its skin. Some young dogs may develop generalized disease and will require therapy. These dogs are often thought to have a defect in their immune system that allows the development of generalized demodicosis and it is therefore important that these animals never be used for breeding purposes.

If dogs older than 18 months develop demodicosis they are said to have adult-onset demodicosis. Adult-onset demodicosis is thought to occur because something is wrong with the affected dog’s immune system whereby the body stops surveillance of the normal number of mites. Consequently, the mites are allowed to reproduce in greater numbers and cause skin disease. Often an underlying disease process or a history of certain types of drugs may be responsible for suppressing the immune system and inducing demodicosis. Overuse of glucocorticoids or cortisone-like medications are the most common drug to increase the risk of development of

demodicosis. Occasionally, no underlying reason can be found; this is called “idiopathic” or perhaps related to an incompetent immune system.

A strong tendency exists for certain breeds to acquire demodicosis. Some of these breeds include the following:

- Rottweilers
- Pit bull terriers
- English bulldogs
- Chinese shar peis

Because of this, spaying or neutering a pet with demodicosis is strongly recommended.

What are the symptoms of demodicosis?

The symptoms of demodicosis typically include the following:

- Hair loss
- Redness of the skin
- Increased pigmentation
- Darkening of affected skin
- Draining lesions (severity and extent will vary)

Feet and face are common sites to be involved, especially in localized forms of the disease.

What tests are needed?

Diagnosis of canine demodicosis is made either with a deep skin scraping or skin biopsy performed by a veterinarian. The mites are tiny and can only be observed under the microscope. The number of mites and the life stages observed (adults, juvenile forms and/or eggs) will help determine the treatment recommendations.

What treatment is needed?

Treatment varies with the severity of the disease. The dog’s overall physical condition, age and breed will also be considerations in the determination of type of treatment.

Treatments can include the following:

- Medicated dips with a product called Mitaban
- Oral daily administration of drugs (ivermectin or milbemycin) to kill the mites
- Antibiotics to treat secondary infection (almost always present)

Your veterinarian will discuss treatment options and determine which therapy is best for your dog and inform you of what possible side effects can occur and what signs to watch for. Your dog will need to be re-evaluated every 4 to 6 weeks by your veterinarian. Skin scrapings will be

repeated and treatment must continue until two consecutive skin scrapings without finding mites have been obtained. This may be longer than the time it takes to see clinical resolution of your dog's skin lesions. It is important not to discontinue therapy too early or in most cases the dog will simply relapse.

What is the prognosis?

A dog is not considered cured of demodicosis until a year has passed since any mites were documented on skin scrapings. Some dogs may continue to have mites seen on skin scrapings despite appropriate therapy or they will repetitively relapse whenever medications are discontinued. In such cases lifelong therapy may be required. Stress and other disease processes can exacerbate the disease and affect the success of therapy. Ideally, unnecessary stress (participation in dog shows, major changes in the daily routine, going through a heat cycle) should be avoided during this time. Once the demodicosis is under control, it is important to have your unaltered pet spayed because the estrus cycle can cause a recurrence of the disease.

Treatment Recommendations

Shampoo:

Dip:

Antibiotics:

Other:

Progress Check: Please return in _____ weeks for a progress check and to repeat skin scrapings. If you have any questions or concerns, please call _____.

Contacts for Further Information



**Animal Health
Care Center**
of Hershey

**948 E. Chocolate Ave
Hershey, PA 17033
(717) 533-6745**