DEMODECTIC MANGE

(SOMETIMES CALLED "RED MANGE")

THE CULPRIT - DEMODEX CANIS

Demodectic mange is caused by a microscopic mite called **Demodex canis**. All dogs raised normally by their mothers possess this mite as mites are transferred from mother to pup via cuddling during the first few days of life. (After the pup is older it is unable to pick up demodex mites. Puppies raised by hand, do not ever get demodex mites.) For some reason, conditions change in certain dogs to allow demodex mites to "gain the upper hand;" the mites proliferate and can cause serious skin disease.

- Mites are not transmitted to people or other dogs except from mother dog to pup as described. Demodectic mange (unlike Sarcoptic mange) is not contagious.

- Mites live inside hair follicles -- a difficult place for miticides (chemicals that kill mites) to reach.

Mites are a normal residents of dog skin; it is only in some individual dogs that mites cause problems

DEMODICOSIS -- THE DISEASE ITSELF

Demodectic mange -- also called "demodicosis"-- has three forms:

FORM #1: LOCALIZED

Usually a red, scaly, well-circumscribed lesion on the face or forelegs is present. It generally goes away on its own. **Goodwinol ointment**, an insecticide, may be used daily to control localized demodicosis. Hair regrowth should be evident after about a month of treatment;

however, some localized cases appear "destined" to become generalized and no treatment will prevent this from occurring.

When ointment is used, rubbing the medication on the area may break off the weaker hairs at the margin of the lesion. The lesion may thus appear to get larger at first. **Antibacterial gels** are also used against localized demodicosis and associated skin infections. Often it is best not to treat this condition and to simply allow it to resolve on its own.

Enlarged lymph nodes are a bad sign -- often foretelling generalized mange.

CAN THE PUP BE BRED LATER?

Sometimes the puppy with localized demodicosis was obtained for breeding purposes. The current recommendation is not to treat these puppies so that we can determine if the condition will stay localized and resolve or if it will generalize. If it stays localized and eventually resolves without treatment, the animal is still a candidate for breeding. If the condition generalizes to cover the entire body, the animal should be sterilized. If the condition receives treatment and resolves, we will never know how the disease would have gone in its natural state and will not know whether the pup is carrying the genetic predisposition for demodectic mange. In this case, it is best to be conservative and not take the chance of passing on genetic predisposition for this disease.

Localized demodicosis is almost exclusively a "puppyhood" disease. When a puppy develops localized demodicosis the chance of the condition resolving is 90% unless there is a family history of demodicosis in related dogs. In this case, chance of spontaneous resolution drops to 50%.

Occasionally an adult dog develops localized demodicosis. We currently do not have good understanding of the prognosis or significance of this condition in an adult dog.

FORM #2: GENERALIZED

The entire dog is affected with patchy fur, skin infections, bald, scaly skin.

Most generalized demodicosis starts as localized demodicosis

ADULT ONSET-- Most demodicosis occurs in young dogs. An older dog should not get deodicosis unless it has an underlying problem with its immune system, possibly even cancer. A veterinarian should be consulted regarding possible primary diseases.

JUVENILE ONSET -- 30-50% of dogs under age 1 year recover spontaneously from generalized demodicosis without any form of treatment. Usually treatment is recommended, though, to facilitate recovery.

IT IS VERY IMPORTANT THAT DOGS WITH A HISTORY OF GENERALIZED DEMODECTIC MANGE NOT BE BRED AS THERE IS A HEREDITARY COMPONENT TO THE DEVELOPMENT OF THE DISEASE.

FORM #3: DEMODECTIC PODODERMATITIS

This condition represents demodectic mange confined to the paws. Bacterial infectious usually accompany this condition. Often as generalized demodicosis is treated, the foot is the last stronghold of the mite. Old English Sheepdogs and Shar-peis tend to get severe forms of this condition The infection can be so deep that biopsy is needed to find the mites and make the diagnosis.

STRESS AND GENERALIZED DEMODECTIC MANGE

Physiological stress is an important factor determining the degree of severity of demodectic mange.

1. Females should be spayed as soon as the disease is controlled. Coming into heat, hormone fluxes, and pregnancy are very stressful. Also, predisposition to demodicosis is hereditary and should not be passed on.

2. The dog should be fed a reputable brand of dog food so as to avoid any nutritionally related problems.

3. Keep the pet parasite-free. Worms are irritants that the pet need not deal with and fleas may exacerbate the itchiness and skin infection.

4. Keep up the pet's vaccinations.

5. The mites themselves cause suppression of the immune system so the pet needs every advantage to stay healthy.

6. Skin infections are usually present in these cases and antibiotics will likely be necessary. It is very important that cortisone type medications such as prednisone NOT be used in these cases as they will tip the immune balance in favor of the mite.

PROGNOSIS

The younger the dog, the better the chance of cure. In many cases of adult-onset demodicosis, the disease is controlled by dips and baths but cure is not always possible. Some cases can never be controlled.

CURRENT TREATMENT OF CHOICE -- IVERMECTIN

Ivermectin is a broad spectrum anti-parasite medication generally used for food animals and horses. It is licensed for use in dogs and cats as a heartworm preventive and as a topical ear mite therapy at this time thus the use of this medication to treat demodicosis is not approved by the FDA. When ivermectin was a new drug it was hoped that it could be used against demodectic mange mites. At first it was found ineffective but later it was determined that daily doses are needed (most other parasites can be controlled with wormings spaced several weeks apart.) Ivermectin is inexpensive relative to Milbemycin (see below) and involves no labor intensive bathing. It DOES, however, taste terrible if given orally (it may be necessary for the owner to learn how to give ivermectin as an injectable treatment.)

THIS MEDICATION IS NOT SAFE FOR USE IN COLLIES, SHETLAND SHEEPDOGS, AUSTRALIAN SHEPHERDS, OLD ENGLISH SHEEPDOGS, AND SOME WOULD SAY, ANY HERDING BREED.

Sensitivity to ivermectin may not be predictably limited to "collie breeds" and thus it is often prudent to use a lower test dose before initiating the relatively high doses of ivermectin needed to treat demodicosis. Not all individuals of collie heritage are sensitive to ivermectin and a test is in development to determine whether an individual should be able to safely take ivermectin or not. There is a range of ivermectin doses used in the treatment of demodicosis and it seems that higher doses do clear infection faster than lower doses. This means that if a lower dose has been ineffective, a higher dose may still work. This does not mean that a pet owner should experament with ivermectin doses on their own as there is some potential for lethal toxicity if this drug is not used appropriately.

For more information on Ivermectin, click here.

TRADITIONAL TREATMENT -- AMITRAZ (MITABAN) DIPS

Unless the animal is largely bald or has a short coat, complete clipping will be required for maximal contact with the dip.

Dip should be preceded by a **benzoyl peroxide bath (Oxydex™ or Pyoben™ Shampoo)**. This helps clear up skin infections and also helps open the hair follicles so the dip can penetrate to the mites. Shampoo must sit on the pet at least 10 minutes before rinsing. CAUTION: this type of shampoo can stain jewelry and clothing.

Dip is applied by sponge. Gloves should be worn while applying dip. The dip dries on the dog's fur and should not be rinsed off. The dog should not get wet between dips.

Dipping occasionally yields mild sedation as a side effect. Very small dogs may become highly sedated and require an antidote but this is unusual. For your convenience, dipping and bathing may be performed at the hospital thus allowing for veterinary supervision in the event of side effects.

Dipping/bathing is recommended every two weeks on the bottle of dip. Most universities are finding that the cure rate jumps from 25% to 80% when dip is used at double strength and applied weekly. No toxic effects have been seen using the dip in this way and this is our current recommendation except in very small dogs and puppies.

The pet's skin is scraped every 2 weeks until 2 consecutive scrapings are negative. Dipping/bathing is discontinued and the pet is rechecked in one month. Dipping/bathing are reinstituted if mites are again found.

AMITRAZ DIPPING SHOULD NOT BE USED IN TOY BREEDS OR IN VERY YOUNG PUPPIES.

NOTE: Amitraz is a drug of the monoamine oxidase inhibitor class. People who are taking selected serotonin reuptake inhibitors (such as Prozac®) could have a bad reaction to the use of amitraz if they administer dips to pets.

SOMETHING ELSE YOUR VETERINARIAN MIGHT TRY -- INTERCEPTOR®

Interceptor (active ingredient: **Milbemycin oxime**) is normally marketed as a monthly heartworm preventive; when it is used on a daily basis, it is effective against generalized demodicosis. This discovery was welcomed by the veterinary profession as finally demodicosis could be treated without labor intensive dipping. The downside to this treatment is expense plus an owner can expect to be using this medication daily for up to 3 months to achieve cure.

***INTERCEPTOR MAY BE USED IN ANY PATIENT SAFELY; THE ONLY DOWNSIDE IS EXPENSE*.**

RELAPSE?

Relapse is always a possibility with generalized demodicosis but most dogs that relapse do so within a 6-12 month period from the time they appear to have achieved cure. When relapse occurs it is often because the dog appeared to be normal and the owner did not return for the appropriate rescrapings. The final scrape is performed one month after treatment has stopped.

SARCOPTIC MANGE IS A COMPLETELY DIFFERENT DISEASE.
Click here for information on Sarcoptic mange.

WE WISH IT WASN'T NECESSARY TO ADD THIS

In older times, some 30 years ago, dipping dogs with demodectic mange in motor oil was a popular home remedy. Skin exposure to motor oil can cause rashes and skin destruction in severe cases. The hydrocarbons can be absorbed through the skin and cause a dangerous drop in blood pressure. If motor oil is licked off the coat, resultant vomiting can lead to aspiration of motor oil into the lungs and pneumonia. Kidney and liver damage can result from motor oil dipping.

PLEASE: DO NOT DIP YOUR DOG IN MOTOR OIL!

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