

Demodectic Mange: It's Not What You Think!

Stephen Sheldon, D.V.M.

Demodectic mange is one of those difficult to understand and explain diseases. The word mange conjures up images of unkempt, dirty, malnourished animals yet this is often not the case with demodectic mange. A very common comment when told of the diagnosis is "but I take such good care of her; how could this happen?" Relax. You have. What you are probably thinking about is Sarcoptic mange, or Scabies. The 2 diseases are vastly different.

Demodectic mange or demodex, is caused by the mites of the demodex species. It differs from Scabies or sarcoptic mange in a number of ways. First, it is not contagious to either dogs or to humans like scabies is. This is a tough concept to swallow for many of us; how can a skin condition so bad looking not be contagious? Trust me it isn't. I had one young lady ask me "well, how do you know". "I went to school for 8 years and I know how to read medical texts and journals" I assured her. More than once I have xeroxed articles for my clients. I'll repeat again. It is not contagious. Second, it is much more difficult to treat than scabies is. And third, it is related to a poorly functioning immune system.

Demodicosis causes hair loss, skin thickening, oozing sores, skin infections, red, irritated skin, and is usually very itchy. There are 2 forms of the disease, both caused by the same mite. One is called localized demodicosis; the other is generalized demodicosis. Again, this is a difficult concept to grasp; 2 different diseases caused by the same organism. Localized demodicosis involves a few patches of hairloss, usually around the head, neck and hocks. It usually occurs in puppies around 6-8 months old and often resolves without treatment. It is not a very serious disease. When the demodex begins to spread uncontrollably we call it Generalized demodicosis; it is easy to distinguish from localized because larger areas of the body are involved. This is a serious disease and requires aggressive therapy. This is also a disease of mostly juvenile dogs; however it is seen in adults. Adult dogs with demodicosis often have an underlying immune or endocrine problem like hypothyroid disease or Cushings disease.

There is a lot we do not know about demodectic mange. Most agree it has an underlying immune system dysfunction involved with it. Specifically, the cell-mediated part of the immune system (as opposed to the humoral or antibody part of the immune system). The most popular theory is that affected dogs have a inherited, cell-mediated immunodeficiency. Some breeds of dog (ie. Shepherds, Dalmations) seem to be affected more than others but demodex is seen in all breeds.

Diagnosis of demodex is fairly straightforward. A scalpel blade is used to scrape the top layers of skin off for examination under a microscope. Your veterinarian should take off enough skin to make the area bleed so be prepared; he or she may even squeeze the area attempting to extricate the mites. IN rare cases, or if your dog is a Shar-pei, a biopsy will be needed to obtain a diagnoses. Skin scrapings are also used to monitor therapy.

There is only one approved product to treat demodectic mange, Amitraz or mitaban. The label recommends treating at a strength of 250 ppm once every 2 weeks. The frequency and strength are often changed by your veterinarian; this is common practice. Treatment is continued 2 to 4 dips after a negative skin scraping. This averages 6 to 8 dips. Here is where treatment gets interesting: some studies show an 86% recovery with 4 to 8 dips (Muller, Kirk, and Scott, 1989) while another study showed a 0% cure rate with the same product (Scott and Walton, 1985). My experiences are closer to the first study with an 86% cure rate.

Many cases are difficult to treat regardless of strength or frequency of the amitraz dips. You should always correct any underlying problems such as nutritional deficiencies, parasitic infestations, endocrine problems or skin conditions to name a few. . Additionally, if you have a female dog it is still recommended to have her spayed. In recent years some new, off label treatments have been discovered (these are treatments that are not FDA approved usage of these drugs). These protocols use the drugs ivermectin and milbemycin (which are the active ingredients in Heartguard and Interceptor). Some animals can be controlled with a combination of dipping and the newer protocols. In very difficult cases it may be necessary to dip with amitraz every 3 weeks or so indefinitely; the toxicity of using ivermectin or mibelmecyn for extended (ie. months and years) has not been evaluated.. Unfortunately, some animals with severe generalized demodicosis cannot be cured and may need to be euthanized.

I empathize with my clients whose dogs contract generalized demodicosis. If we scientists and doctors are frustrated by the disease I can imagine how frustrating it must be for you. The good news is that most dogs are cured and lead completely normal lives (except for breeding which is discouraged if your dog contracts generalized demodicosis). You should always discuss the goals of therapy and the prognosis with your veterinarian. That's what we're here for!