

Mites

-Dog

Eg *Demodex canis*, *Sarcoptes scabiei*, *Otodectes cyanotis*

CS- Some forms of the mange such as Demodectic mange are the result of underlying disease or immunosuppression. The clinical signs (erythema, pruritus, and scale or crust formation) are due to the inflammatory response of the skin and resulting excoriation. Feeding, burrowing, or production of antigenic material by the mite stimulates this response. Mite infestation can result in:

- Direct epidermal damage leading to inflammation. This results in erythema, pruritus, scale formation, lichenification and crust (inflammatory exudates) formation.
- They produce cutaneous hypersensitivity
- Loss of blood or other tissue fluids.
- Mechanical or biological transmission of pathogens

The burrowing and feeding activity of the *S.scabiei* causes intense itching, inflammation, hair loss and formation of the crust of the dried exudates and even haemorrhage on the skin surface.

Sarcoptic mange is a highly contagious and the spread is usually by close physical contact

Tx- Ivermectin

- Hair should be clipped before acaricidal treatment.
- A course of antibiotic should be given to inhibit bacterial infection
- Preparations of benzyl benzoate @ 0.2-0.5% in large animals and 0.5% in small animals
- Ivermectin @0.2 mg/kg BW s/c
- *Sarcoptes* mange can be treated with 0.02 percent benzene hexachloride dips

Demodex-Amitraz dip (Mitaban®) at 250 ppm every 2 weeks is the only approved miticidal treatment for generalized demodicosis in the United States.

- Ivermectin may be given orally at escalating doses using 100 µg/kg increments. Begin with 100 µg/kg for 3 days followed by 200 µg/kg for 3 days followed by 300 µg/kg. Some practitioners recommend remaining at the 300-µg/kg dose whereas others recommend continuing to increase the dose every 3 days to 600 µg/kg.
- Milbemycin oxime has also been used daily at doses ranging from 0.5 to 2 mg/kg. Doses are escalated gradually, building to a final dose of 1.5 to 2.0 mg/kg.
- Moxidectin/imidacloprid topical carries a label claim in Europe for treatment of *D. canis* infestation at the standard labeled dose. Treatment is more effective when administered every two weeks.

- Doramectin may be injected subcutaneously once a week at the dose of 600 µg/kg in dogs negative for the MDR1 gene mutation.

Control and Prevention

- Routine use of fipronil, topical moxidectin, or selamectin likely will prevent infestations with *Sarcoptes scabiei* in dogs.
- Routine selamectin treatment should prevent ear mite infestations.
- For intact female dogs that develop generalized demodicosis, spaying is recommended because they may experience relapse of disease in subsequent heat cycles.
- The development of demodicosis was long believed to have a genetic predisposition, and as a result, some veterinarians discourage breeding affected animals. The propensity to develop localized demodicosis is hereditary, however, the hereditary nature of generalized demodicosis has not been clearly demonstrated.

-Cat

Eg *Notoedres cati* , *Otodectes cyanotis*

CS- Mite infestation can result in:

- Direct epidermal damage leading to inflammation. This results in erythema, pruritus, scale formation, lichenification and crust (inflammatory exudates) formation.
- They produce cutaneous hypersensitivity
- Loss of blood or other tissue fluids.
- Mechanical or biological transmission of pathogens

Tx- Ivermectin

- Lime sulfur dips have been reported effective. Dips should be performed weekly for 6 weeks with 3.1% solution (4 ounces per gallon of water). Skin irritation may occur.
- Ivermectin has been used once weekly at 0.3 mg/kg orally for four consecutive weeks. Side effects may occur.
- Amitraz has been used in cats at a 0.0125 to 0.025% solution every 5 to 7 days for 4 to 6 weeks. Side effects may occur.

