

ausrichter malassezia newsletter

Number 49

Dermatophytosis [ringworm], Malassezia dermatitis, otitis are significant diseases of companion animals.

Many companion animal owners know little about these diseases and are concerned when their animals contract these diseases. The zoonosis of ringworm is an issue especially when there are children in a household. It is widely known ringworm is contagious and contact with ringworm infected animals is likely to result in children being infected with ringworm.

Differential diagnosis is important. The treatment prescribed must be effective when used as directed. The application of the treatment and the ability of the pet owner or carer to apply the treatment as prescribed and at the frequency recommended is another issue.

Topical treatments

Topical treatments with an extended length of efficacy are preferred. Treatments must resolve infections in both hair and skin. The treatment should kill ringworm spores. This stops the spread of the infection. Leave on treatment applied according to directions are preferred to shampoos and washes which are applied and then rinsed off. The convenience for the animal carer or owner of leave on treatments with extended antimycotic activity is a significant advantage and likely to improve treatment compliance and the treatment outcome.

Malassezia

Malassezia pachydermatis is a common yeast organism that is found on normal and abnormal canine skin and ears. On normal healthy skin, it causes no problems, but when the environment of the skin is altered for any one of many reasons, Malassezia can cause severe dermatitis or otitis (inflammation of the skin or ears respectively). Some of the factors that can lead to Malassezia dermatitis include moisture (as in dogs with skin folds or floppy ears with narrow ear canals), excessive waxy or scaly build-up (as in seborrhoea), and allergic and bacterial skin disease.

Not only is Malassezia a secondary cause of dermatitis in any dog with one of these predisposing conditions, but it may be the primary or initiating cause of skin problems in certain breeds of dogs. This may be related to an alteration in immune response to the yeast.

Malassezia dermatitis can affect any breed of dog, but the following breeds are predisposed to this disease: poodles, basset hounds, West Highland white terriers, cocker spaniels, and dachshunds.



The Westie breed is especially predisposed to Malassezia Dermatitis.

High humidity and temperature may increase the frequency of the cases. Other factors that may be a predisposing factor to this hypersensitivity disease include concurrent infections and food and flea allergies. Genetic factors are also suspected in young dogs and in predisposed dog breeds. Malassezia pachydermatis is also known as Malassezia Canis, Pityrosporum pachydermatis, P. Canis.

Topical treatments licensed for canine Malassezia otitis externa in veterinary medicine generally contain **imidazole** antifungals.

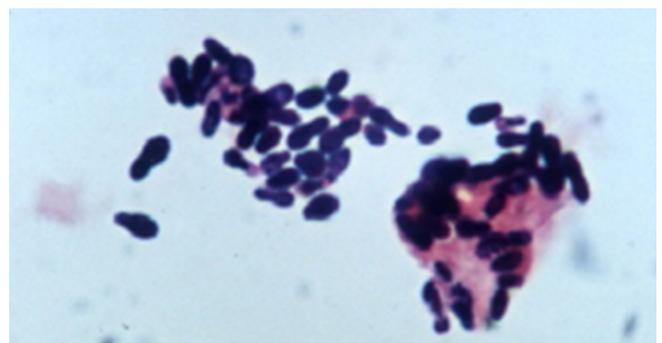
As Malassezia yeasts are located within the stratum corneum, topical therapy alone may be sufficient to resolve the clinical signs of infection, provided the owner is compliant with treatment directions.

Treatment of Malassezia

Malassezia Dermatitis is recognised as commonly concurrent with pyoderma in dogs. It is caused by *Malassezia pachydermatis* (*Pityrosporum canis*) a lipophilic nonmycelial yeast. It is a commensal organism of the skin, ear canal, anal sacs, vagina and rectum of dogs.

Therapy is directed at killing the organism. An alternate treatment is **enilconazole**.

Dowling P, Can Vet J, Vol 37, 1996.



Malassezia.

Safety profile of registered topical treatments

A number of topical treatment registered for treatment of animals are labelled POISON whereas other are labelled CAUTION an indication of a safer exposure and use profile for the animal and user. No doubt products labelled CAUTION are preferred for use on animals in households where children are present or inhabitants of those households have a particular sensitivity to chemicals.

Unregistered and unproven treatments for Dermatophytes

A search of the internet indicate a huge number of unregistered and untested topical treatment products recommended and promoted for treatments of Dermatophytes in animals. Most of these products have no clinical efficacy information to support their use. The safety of these treatments on animals or for the person applying the chemical is unknown. This seems crazy but it's true!

Antifungal properties of Iodine

The antibacterial properties of Iodine are well documented where the data on the antifungal properties of Iodine are equivocal and depend on the concentration of the solution applied¹. The label instructions are unclear as to the number and frequency of treatments for skin infections. A report indicated the Iodine concentration is critical for antifungal efficacy¹. In any case iodine is not effective against ringworm spores and unsuitable for the decontamination of the animal's environment. Iodine formulations are labelled POISON.

1. Woloszyn S; PolArch. Weter: 1987, 27(4) 2S-34.

ESCCP: *Superficial Mycosis in Dogs and Cat; Guidelines 02 Second edition – February 2011.*



enilconazole 100 mg/mL 100 mL bottle APVMA No 70030/62332

Enilconazole – Clinical reports

An evaluation of topical therapies for the treatment of dermatophyte infection on dogs and cats. Enilconazole was reported more effective than chlorhexadine, povidone iodine, ketaconazole, sodium hyperchloride and captan. It has proven safe at higher doses in dogs and cats. The emulsion (0.02% enilconazole + water) is sponged onto the animal at 3-4 day intervals for 4 treatments.

Is applied at the same concentration (0.02% enilconazole + water) as a spray to prevent dermatophyte re-infection.

Vet Pharma & Therap: J Driver & M Papich, 2009.

Effectiveness of antimycotics against dermatophytes (of veterinary origin): Comparison in two invitro tests

A number of antimycotic drugs (econazole, enilconazole, fluconazole, griseofulvin, itraconazole, ketaconazole and miconazole) were tested against 36 dermatophyte strains. Fluconazole was not effective against the dermatophytes.

Enilconazole and econazole were the most effective. Nearly 50% of the dermatophytes tested were griseofulvin resistant.

Galuppi R et al; Vet Res Commun 2010, June: 34, Supp 1; S 57-61.

Treatment of dermatophytosis should always include environmental decontamination which prevents the spread of infection to other animals or humans and re-infection after the end of treatment of animals.

Rochette et al; J Vet Pharmacol. Therap. 26, 31-53, 2003.

Use of shampoos in fungal diseases for dogs and cats

Non antifungal shampoos or those with insufficient antifungal properties can increase the spread of active spores and widen the infection.

In a recent study a shampoo containing chlorhexadine (2%) and miconazole (2%) was shown to accelerate the clinical cure but not a mycological cure of infected cats with *Microsporum canis*. The addition of griseofulvin to shampoo treatment did not improve the cure rate.

Carlotti DN; Vet Quarterly, 1 Nov, 2011.

Description and properties of Enilconazole – antimycotic for topical application on cattle, horses, and dogs (approved/registered for cats in France)

Enilconazole is a broad spectrum antimycotic belonging to the imidazole group, a topical antimycotic used in veterinary medicine. It is indicated for dermatophytes in cattle, horses, dogs and (cats in France).

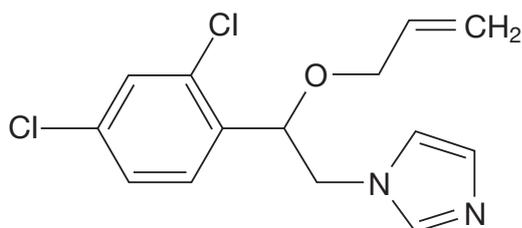
Enilconazole is also used for the disinfection and for decontamination of farm buildings and other structures that may be contaminated from ringworm infection on animals.

A topical antimycotic with a broad spectrum activity against dermatophytes and yeasts. Enilconazole is reported as having antibacterial properties with a bactericidal effect, it is not effective against *E coli* or *Pseudomoniae*.

The antimycotic is reported as inhibition of cytochrome P₄₅₀ dependant on 14 α dimethylation of lansterol to ergosterol, a specific component of membranes of fungi and yeasts.

Local tolerance studies showed that enilconazole is minimally irritating with a weak sensitising potential. Tests in man with different formulations showed no irritation or sensitivity.

EMEA/MRL/496/98 – Final.



Enilconazole

The importance of both an effective fungicidal treatment for the dermatophyte infected animals and its dermatophyte contaminated environment is essential if the infection is to be resolved.

Austrazole™ Topical fungicide for dogs and horses; 100 mg/mL enilconazole is for both treatment of the infected animal and to decontaminate the animal's environment of spores. It is used at the same dilution for both uses.

Spray applicators to treat the animal's environment/habitat to eliminate fungal spores and yeasts.



500 mL spray bottle



5 Lt pressure spray pack

ABRIDGED PRODUCT INFORMATION

Austrazole™

Topical fungicide for dogs and horses

ACTIVE CONSTITUENT:

Enilconazole 100 mg/mL

PROPERTIES

Enilconazole is an imidazole with potent antifungal activity applied topically for the treatment of dermatophytosis and aspergillosis. It has been used safely in cats, dogs, cattle, horses, and chickens¹.

1. The Merck Veterinary Manual; 2009–2015.

INDICATIONS

For control of ringworm (*Microsporum* spp. and *Trichophyton* spp.) and other forms of dermatomycosis in horses and dogs. A product containing Enilconazole 100 mg/mL is registered in France for use on cats for treatment of ringworm.

DIRECTIONS FOR USE

Enilconazole is a synthetic antimycotic with potent antifungal actions against dermatophytes.

DOSAGE AND ADMINISTRATION

See bottle label/pack or insert for complete dosage instructions.

MEAT WITHHOLDING PERIOD (HORSES)

DO NOT USE less than 28 days before slaughter for human consumption.

SAFETY DIRECTIONS

Avoid contact with eyes and skin. When preparing wash or spray wear face shield or goggles. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash face shield or goggles.

FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 131126.

DISPOSAL

Dispose of empty container by wrapping with paper and putting in garbage.

STORAGE

Store below 30°C (room temperature).
Protect from light.

PRESENTATION

Bottles of 50 mL, 100 mL and 1 Litre.

APVMA Approval No.: 70030/62332

Quick reference Austrazole™ Topical Fungicide for dogs

Disease	Description	Treatment	Comments
Dermatophytosis (ringworm).	Ringworm infections are infrequent in dogs. A potential for zoonosis.	Enilconazole every 3-4 days for 4 treatments.	All over/leave on treatment. Important to treat infection in hair and skin. Treat dog's habitat to decontaminate and kill spores and prevent re-infection.
Malassezia (yeast).	Malassezia frequently diagnosed on skin and ears in dogs.	Enilconazole all over treatment 3-4 days for 4 treatments. Chronic infections may require longer treatment period. Treatment for Otitis externa (off label).	All over/leave on treatment. Important to treat infection in hair and skin to eliminate infection. Dogs with chronic infection need long term treatment. Concurrent treatment of ears essential to eliminate Malassezia. Recommended treatment for interdigital infections.
Bacterial/yeast infection.	Mixed infection of the skin.	Enilconazole all over treatment 3-4 days for 4. treatments. Chronic infections will require longer treatment period.	Antimycotic/antibacterial action of Enilconazole. Easy to apply leave on treatment.

Quick reference Austrazole™ Topical Fungicide for cats (off label use)

Disease	Description	Treatment	Comments
Dermatophytosis (Ringworm) Microsporum canis.	A frequent infection of kittens and cats. High potential for zoonosis particularly pre-pubescent children. Cats may be infected without symptoms of ringworm infection.	All over treatment Enilconazole every 3-4 days for 4 treatments. Dry off excess emulsion to prevent grooming and hyper salivation. Isolate infected cats during treatment to prevent spread of infection. A number of studies indicate Enilconazole is very effective for treating ringworm in many animal species including cats.	Clip hair of infected cat. Treat hair and skin as both may be infected. All over treatment essential to kill ringworm spores. Treat the cat by immersing in emulsion or by sponging the entire body. Dry off and prevent cats from grooming.
Malassezia (yeast).	Malassezia an infrequent infection of cats.	Treatment with enilconazole is effective.	Treat the cat by immersing in emulsion or by sponging the entire body. Dry off and prevent cats from grooming.
Mixed skin infections.	Mixed skin infection. An infrequent occurrence.	All over treatment 3-4 days for 4 treatments. Chronic infections may require longer treatment period.	Antimycotic/antibacterial action of Enilconazole. Easy to apply leave on treatment. Dry off and prevent cats from grooming.

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