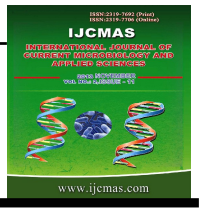
International Journal of Current Microbiology and Applied Sciences
ISSN: 2319-7706 **Volume 2 Number 11 (2013) pp. 66-71**
http://www.ijcmas.com



Original Research Article

Ear canker and its Clinical Management in Rabbits

S.Ayodhya*

Campus Veterinary Hospital, TVCC, College of Veterinary Science, Rajendranagar, Hyderabad, A. P, India
**Corresponding author e-mail: sayodhya_6@yahoo.com*

A B S T R A C T

Rabbit ear mites (*Psoroptes cuniculi* species) are sometimes likely to be serious, if left untreated; they can lead to infection, deafness, emaciation and finally death. In the present case the treatment was followed by injecting Ivermectin on day 1, 7, 14 and 21 and some severely infested rabbits were repeated for two more weeks to break the life cycle of mite. Benzyl benzoate was applied twice a day and Pheniramine maleate was given to reduce the itching sensation. Following therapy improvement was observed after one to three weeks that was recorded as dryness of ear lesions, falling of scabs and reduced itching sensation. After 4 weeks of therapy out of eight, six rabbits were recovered by falling down of remaining scabs, complete disappearance of itching and secondary sores. However the remaining two rabbits also showed complete recovery after six weak of therapy.

Keywords

Rabbit ear mites; *Psoroptes cuniculi*; Ivermectin; itching sensation.

Introduction

Rabbit ear mites (*Psoroptes cuniculi* species) are a common parasitic disease problem in both pet and commercial rabbit population Due to stress condition, imbalanced nutrition, unclean living conditions, over-crowding, extremes of heat and cold conditions ear mite tend to spread more quickly through a rabbit population. Ear mites are sometimes likely to be serious, if left untreated; they can lead to infection, deafness, emaciation and finally death. The present paper puts on record about clinical and managemental aspects of ear mite infection in rabbits

Materials and Methods

Skin scrapings were obtained from various sites of effected rabbits with the help of a scalpel blade. The blade is used gently to scrape layers of the skin, usually until a small amount of blood is oozing from the site. The skin scraping sample is placed on microscope slide, mixed with sodium hydroxide (10%) and evaluated under microscope.

Eight rabbits that were brought to the Campus Veterinary Hospital, Teaching Veterinary Clinical Complex, College of

Veterinary Science, Rajendranagar with history of ear crust, intense itch, shaking head were considered for the study. Detailed clinical examination revealed secondary sores, scabs (fig.1), a brown waxy build up inside one or both ears and rabbits have several scratch marks in their ear from digging at it with it paws (fig 2). Flaky crusts or scales, composed of mites, mite feces, blood and inflamed skin cells were observed. In severe cases the rabbit could not hold its ears erect due to accumulation excessive crusts, presenting an unpleasing odor. History of ear-scratching and head-shaking by these effected rabbits during was an additional complaint. As the rabbit ear mites multiply in number, the ear mite infestation expands and extends from the ear canal of the rabbit onto the outer ear flap (pinna). Effected rabbits that were diagnosed for ear canker treated with ivermectin @ 200 micro g/kg body wt. weekly once for 4-6 weeks s/c.

However these cases were also administer with chlorphiniramine maliate 0.2-0.4 ml /per rabbit i/m once daily for 5-7 days and Benzyl benzoate lotion topically.

Results and Discussion

Detailed clinical examination of infected rabbits revealed, scab formation, excess secretion of brown waxy build up inside one or both ears, resulting in shaking of head These findings are agreement with (Beck W and Kleintierpraxis, 2000) and further scratching of ears due to intense itching resulted in scratch marks on their ear . Microscopic examination of skin scrapings revealed Nemours ear mites of Psoroptes *spp* (fig.3).

Ear mange a common parasitic disease of both pet and commercial rabbits is caused by the parasite *Psoroptes cuniculi* whose (Perrucci et al., 2005). Incidence is more in rabbits. They may be found in only one ear, or in both, and in some cases may spread to the surrounding areas including the head, neck, legs, perianal region and ventral abdomen .They are adapted for surface feeding rather than piercing the epidermis and causes dermatitis with subsequent scab formation (Daniel E. Rafferty and Jeremy S. Gray1987).

In the present study the effected rabbits were presented with all ear crust, ears with intensely itchy, secondary sore and scabs that are in agreement with Henry J. Griffith (1971) who reported that the mites puncture the epidermis of the ear, suck lymph and give rise to local inflammatory swelling from which serum exudes, coagulates and forms massive encrustations inside the ear.

This mite-induced ear crust causes the rabbit's ear to become intensely itchy, such that the rabbit often develops secondary sores and scabs and infections of the ear as a result of the animal's scratching and self-trauma activities. Being a contagious parasitic skin disease, rabbit ear mites are generally spread from rabbit to rabbit by direct skin contact between infected and non-infected rabbits. Non-infested rabbits can also contract the mites through contact with the hutch and burrows of ear-mite-infested rabbits. Mite transmission from rabbit to rabbit is generally greater in conditions whereby large numbers of rabbits are being kept in close proximity to one other.

Clinical examination can only indicate the probability of psoroptic mange and the diagnosis must be confirmed by microscopic examination of scab material from the ear (Ribbeck, R.1976).

Figure.1 Psoroptes on ears with large scales

Figure.2 Scabs on the eyes and toes

Figure.3 Psoroptes cuniculi

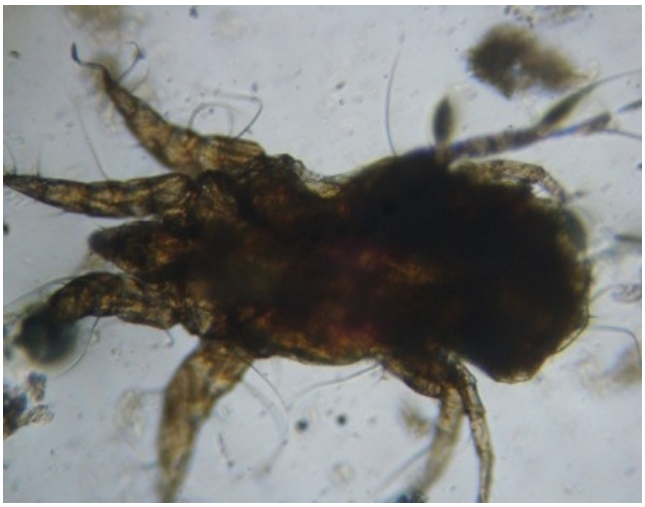


Figure.4 After one week of theraphy

Figure.5 After 3 weeks of theraphy

Figure.6 After 4 weeks of theraphy

In the present study the confirmatory diagnosis was done by microscopic examination of skin scraping that was found positive for ear mites (*Psoroptes cuniculi*) in different stages.

In the present case the treatment was followed by injecting Ivermectin on day 1, 7, 14 and 21 and some severely infested rabbits were repeated for two more weeks to break the life cycle of mite. Benzyl benzoate was applied twice a day and Pheniramine maleate was given to reduce the itching sensation.

Following therapy improvement was observed after one to three weeks that was recorded as dryness of ear lesions, falling of scabs and reduced itching sensation (fig 4 and 5). After 4 weeks of therapy out of eight, six rabbits were recovered by falling down of remaining scabs, complete disappearance of itching and secondary sores (fig 5). However the remaining two rabbits also showed complete recovery after six weak of therapy.

While treating rabbits for ear canker the crust that appears in rabbit's ear should not be reversed as this procedure leave open, bloody skin that will easily become infected. This just puts the rabbit through unnecessary pain. The crusts will generally just fall off on their own when your rabbit shakes his head.

The therapy instituted in the present case is in agreement with Bowman, *et.al.*,(1992), Chand, *et.al*., (1993), Curtis et al (1990) who reported the efficacy of ivermectin against ear mite in rabbits and , Mishra, (1995), Chakurkar *et.al*., (1997), who reported that efficacy of a combination of ivermectin with benzyl benzoate in the treatment of ear mite infestation in rabbits.

Acknowledgement

Author acknowledge the Professor & Head, Campus Veterinary Hospital, Teaching Veterinary Clinical complex, College of Veterinary Science, Rajendranagar, Hyderabad for allowing for research and for the sample collection.

References

Beck, W., and Kleintierpraxis. 2000. Ear mange in domestic rabbit caused by *Psoroptes cuniculi* (Acari: Psoroptidae) - biology of the mite, pathogenesis, clinical features, diagnosis and treatment. 45: 4, 301-308.

Bowman, D. D., M.L. Fogelson and Carbone, L. G. 1992. Effect of ivermectin on the control of ear mites (*Psoroptes cuniculi*) in naturally infested rabbits. American. J.Veter. Res. 53(1): 105-109.

Chakurkar, E. B., R.N.S. Sundaram and Bhattacharyya, A. R. 1997. Efficacy of benzyl benzoate and ivermectin in the treatment of ear mite infestation in rabbits. Indian Veter. J. 74(4): 288-289.1.

Chand, T. K., R.P. Thakur and Rai, K.1993. Efficacy of ivermectin against ear mite in rabbits. Veter. Rev.(Kathmandu). 8(1): 1-3. 8

Curtis, S. K., R. Housley and Brooks, D. L. 1990. Use of ivermectin for treatment of ear mite infestation in rabbits. J. American Veter. Med. Assoc.196(7): 1139-1140

Daniel, E., Rafferty and Jeremy S. Gray.1987. The Feeding Behaviour of Psoroptes spp. Mites on Rabbits and Sheep. The American Soc. Parasitol.73(5): 901-906

Guillot, F. S., and Wright, F. C. 1981. Evaluation of possible factors affecting

degree of ear canker and numbers of psoroptic mites in rabbits. Southwestern Entomol. 6(3): 245-252.

Henry. J., and Griffiths. 1971. some common parasites of small laboratory animals 5:123-135

Ribbeck, R., 1976. The ear mite (Psoroptes cuniculi) of the domestic rabbit. Angewan. Parasitol. 17(4): 29.

Mishra, K. C., 1995. Incidence and management of ear mite infestations in rabbits. Indian. Veter. J. 72(8): 861-863.

Ulutas, B., H. Voyvoda, G. Bayramli , T. Karagenc, S. Perrucci, G. Rossi, G. Fichi and O'Brien, D.J. 2005. Efficacy of topical administration of eprinomectin for treatment of ear mite infestation in six rabbits.