

تأثیر دیازینون بر علیه جرب گوسفندان

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خلاصه :

تأثیر دیازینون از طریق روش اسپری بر علیه آلودگی طبیعی با سارکوپتیس، پسرورپتیس و کوریوپتیس بر روی ۳۲ رأس گوسفند مورد ارزیابی قرار گرفت. نتایج نشان می‌دهد که گوسفندان آلوده به جرب کوریوپتیس در درمان اول، دوم و سوم به ترتیب به میزان ۴۵/۵، ۸۲/۵ و ۱۰۰ درصد بهبود یافته‌اند. این ترکیب بر روی آلودگی پسرورپتیس در سه تناوب درمان به ترتیب ۳۳، ۸۳ و ۹۲ درصد مؤثر بوده است در حالی که مشاهدات نشان می‌دهد این ترکیب بر علیه آلودگی با سارکوپتیس در دو تناوب درمانی به میزان ۴۴ و ۱۰۰ درصد مؤثر می‌باشد. هیچگونه تأثیر سوء در دام‌های درمان شده مشاهده نگردید. همچنین در طول تجربه گروه‌های درمان نشده آلودگی مستمر با جرب‌های فوق‌الذکر را نشان داده‌اند.

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References :

- 1) Blanchflower, W.J., Mccracken, R.J., Rice, D.A. and Clement, A. 1990: Survey of levels of Propetamphos and Diazinon used to control sheep scab in Northern Ireland. *vet. rec.*, 126: 263-265.
- 2) FAO, 1990: FAO Yearbook: Production. Vol. 44. Statistics Series No. 99. Rome 1991.
- 3) Kirkwood, A.C. and Quick, M.P. (1981): Diazinon for the control of sheep scab. *Vet. Rec.*, 108: 279-280.
- 4) Kirkwood, A.C. 1980: Effect of *Psoroptes ovis* on the weight of sheep. *Vet. Rec.*, 107: 469-470.
- 5) Magee, J.C. 1974: Biology and control of the itching mites *Sarcoptes scabiei* in swine. Ph.o. Dissertation. Iowa State Univ., Ames, USA.
- 6) Maharat, W.S. & Ruesel, L.D. 1978: *clinical Parasitology*, 5th ed. The Iowa State Univ. Press, Iowa.
- 7) Milic, L., Sajti, G., Muatov, L., Odri, S. & Dermanovic, D. 1985: Results of using Ektanon (Diazinon) for controlling sheep scab. *Veterinarski Glasnik*, 39(9/10): 1055-1059.
- 8) Rathore, M.S. of Lodha, K.R. 1973: Observations on sarcoptic mange in camel in Rajasthan. Incidence and intensity. *Indian Vet. J.*, 50(11): 1083-1088.
- 9) Rosa, W.A.J. and Lukovich, R. 1970: Response of different *Psoroptes ovis* to dips containing Lindane or Diazinon. *Revta. Med. Vet.* 51: 127-129.
- 10) Soulsby, E.J.L. 1982: *Helminths, Arthropods and Protozoa of Domesticated Animals*. 7th ed., Baillier Tindall, London.
- 11) Sweatman, G.K. 1958: On the life history and Validity of the species in *Psoroptes*. *Canad. J. Zool.*, 36: 110.
- 12) USDA 1980: Guidelines to the control of insects and mites, pest for toad fibres, feed ornamental, livestock, households, forests and forest products. *Agric. Handbook*, No. 571.

become more extensive, itchiness continued unabated and they remained positive for mange throughout the course of study.

The present results on the efficacy of Diazinon against, Psoroptic,

Chorioptic and Sarcoptic mange of sheep confirmed the earlier observations (1, 3, 7 & 9). Thus Diazinon can be recommended for safe treatment of mange in sheep with no side effects.

surroundings free from mites. General safety instructions were also followed as described by USDA (12).

Assessment Criteria : All the mange infested sheep in group A1, B1 and C1 were sprayed with Diazinon at a concentration of 0.15 percent and were constantly observed daily for clinical improvement and for frequency of rubbing or scratching of the body. The skin scrapings were examined on 7th, 14th and 21st day of the treatment. The scrapings were processed as per technique used by Magee (5). Negative skin scrapings, subsidence of lesions, stopping of itching and smoothening of skin surface were taken as criteria to evaluate the efficacy of Diazinon.

Results and Discussion :

The results of the skin scrapings observed microscopically at different days before and after treatment with Diazinon are presented in Table 1.

The lesions show signs of healing within 7-15 days. There after, rubbing and scratching of the body stopped completely, while mild lesions were noticed in one animal treated for Psoroptic mange. On day 21 no live mites or eggs were present in the skin scrapings except in one animal. No side effects were observed after spraying the animals infested with Psoroptic, Chorioptic and Sarcoptic mange with 0.15 percent watery solution of Diazinon. The lesions in the untreated sheep (A2, B2 & C2)

Table 1 - Efficacy of Diazinon against Mange

Type of Mange	No. of Animals	Animals cured after treatments		
		1st	2nd	3rd
Psoroptic	12	4 (33%)	10 (83%)	11 (92%)
Chorioptic	11	5 (45%)	9 (82%)	11 (100%)
Sarcoptic	10	4 (40%)	10 (100%)	10 (100%)

infested with Psoroptic. Chorioptic and Sarcoptic mange at Muridke and Sadoke near Lahore were used in this study of which 13 animals were kept as untreated control all these animals were kept under similar feeding and managemental conditions throughout the course of treatment. The study was conducted during late winter months.

Collection and Examination :

Besides the clinical signs, skin scrapings collected in 10 percent potassium hydroxide, were examined for mites and their eggs. The mites were identified from their characteristic morphology (6 and 10).

Psoroptic Mange : Fifteen animals (6 months to 5 years) naturally infested with *Psoroptes ovis* were used in this study. In 12 animals lesions were distributed all over the woolled parts of the body. These animals were divided randomly into two groups i.e. A1 and A2. First group (A1) contain 12 animals while second group (A2) comprised of 3 animals which served as untreated control.

Chorioptic Mange : Sixteen animals naturally infested with *Chorioptes ovis*

ranging between 7 months to $4\frac{1}{2}$ years were used in this study. Lesions were distributed on the hind legs between toes and on the scrotum of rams. These animals were randomly divided into two groups i.e., B1 and B2. Group B1 comprised of 11 animals while group B2 consist of 5 animals which acted as untreated control.

Sarcoptic Mange : Fifteen animals with age ranging between 6 months to 5 years were used in this study. These animals were naturally infested with Sarcoptic mange. Lesions were distributed on non-wooled parts of the body especially head and face. These were divided randomly into two groups C1 and C2. Groups C1 comprised of 10 animals while group C2 consist of 5 animals which served as untreated control.

Acaricide Used : Diazinon (*Neocidol - R, Ciba Geigy*) at a concentration of 0.15 percent in water was used. Three spray applications were given at an interval of 7 days on each occasion. Building and bedding were also sprayed with the same concentration of Diazinon for making the

Efficacy of diazinon against mange in sheep

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Summary :

Efficacy of Diazinon (Neocidol) was evaluated through spray applications of 0.15 percent watery solution against naturally infested Sarcoptic, Psoroptic and Chorioptic mange in 33 sheep. It cured 45.0, 82.0 and 100 percent cases of chorioptic mange after first, second and third applications, respectively. Efficacy against psoroptic mange was 33, 83 and 92 percent, respectively, while the efficacy against sarcoptic mange was found to be 40% and 100 percent after two consecutive applications. No side effects were observed after treatment with Diazinon. The untreated control group remained positive for mange throughout the course of treatment.

Introduction :

Sheep is an economically important animal to million of landless rural population and marginal farmers of Pakistan. Out of 1,100 million sheep in the world, 35.41 million sheep are located in Pakistan (2). Mange in sheep is very common dermatological problem and is mostly caused by *Psoroptes ovis*. *Chorioptic ovis* and *Sarcoptes scabiei* (11). Disease is prevalent in cold weather and spread slowly during summer

months (8). The impact of the mange in sheep lies on their general health and growth and productivity. It is known to cause 30 percent loss in weight (4), besides the loss in wool. Mites also secrete substances which are toxic to the host and producing a variety of local as well as generalized syndromes. Keeping in view the importance of this malady, the affected sheep were treated with Diazinon

Materials and Methods :

A total of 46 sheep naturally

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