

Efficacy of Doramectin and Fendendazole against naturally infected dairy animals with parasites at central zone of vidarbha region Of Maharashtra State

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Abstract

Comparative efficacy of doramectin and fenbendazole was studied against naturally infected dairy animals with helminth parasites showing clinical symptoms such as rough body coat, emaciation, diarrhoea and weakness etc. Based on the number of days taken for clinico-parasitological cure and the mean reduction EPG, doramectin was found to be superior to fenbendazole.

Keywords: Doramectin, Fenbendazole, Helminth, natural infection, Vidarbha region,

Introduction

The anthelmintic therapy (with doramectin and fenbendazole) gastrointestinal infection in dairy animals of central zone of vidarbha region (Maharashtra) was studied during the period from July 2002 to June 2003 at Nagpur. The prevalence of major helminth parasites was observed includes nematode. *Trematodes* and cystode like *paramphistomes*, *Toxocara*, *Moneizia*, *strongyl-oides*, *Haemonchrus*, *Fasciola*, *Schistosoma*, *Trichuris*, *Oesophagostonum* and *Trichostronglyous* species. The helminth infection result in great economic losses to livestock industry due to deterioration of health and reduced production of animals (Mahesh kumar,2002). Naturally infected dairy animal showed the clinical symptoms such as rough body coat, ematiation ,dirrhea and weakness etc. The dairy animals naturally infected with mixed gastrointestinal helminth were used to assess the relative efficacy of anthelmintics viz. Doramectin and fenbendazole.

Material and Method

Doramectin (Pfizer India Ltd. Bombay) and fenbedazole (Intervet India Pvt. Ltd.) were evaluated

for their efficacy in naturally infected dairy animals. The dose of all drugs and their mode of admini-stration is given in table.

Group-I – Doramectin @ 1 ml/ 50 kg s/c
Group-II – Fenbendazole @ 7.5 mg/ kg orally
Grpoup-III – was kept as the infected, untreated and uninfected untreated.

In this therapy 30 parasitic infected animals from yavatmal district were used and divided into three groups. To assess the efficacy of drugs the faecal sample of all cattle were examined with respect to reduction of eggs. Animal under study were divided into three groups, each group consisting of 10 animals. Out of these two groups was given anthelmintic at the doses given below.

To assess the efficacy of drugs , the faecal sample of all animals were examined daily with respect to reduction of eggs. The efficacy was calculated as fallows:

$$\text{Efficacy of treatment} = \frac{(\text{Mean eggs values before treatment}) - (\text{Mean eggs values after treatment})}{(\text{Mean eggs values before treatment})} \times 100$$

Result and Discussion

Doramectin was given subcutaneously at the dose rate of 1 ml/ 50 kg body weight per animal once

Table-1. Efficacy of Dormactin and fenbendazole on different groups.

Group	Drug	EPG /gram doses(mean) on days				Percent reduction of EPG on days (Efficacy)		
		0 day	7 day	14 day	21st day	7th day	14th day	21st day
I	Doramectin	5140	80	—	—	98.68	100	100
II	Fenbendazole	5250	610	190	—	89.57	96.92	100
III	Infected untreated	5350	5310	5360	5450			

and subsequent faecal examination of all animals was done on first, second and third week of treatment.

The mean EPG of mixed infection after treatment was found as 5140, 80 and on second week with an average of 98.68 and 100 percent. All the animals were cured effectively on second week of treatment.

Fenbendazole was given orally at the dose rate of 7.5 mg/ kg body weight. Faecal examination of all animals was done on first, second and third week of treatment. The mean reduction EPG of infection after treatment was found as 5250 on first week, 610 on second week and 190 on third week with an average of 89.57, 96.92 and 100 percent and all animals were cured on third week of treatment. No side effects such as gastric irritation, photosensitization and diarrhea in both the drugs were noticed. Animal of unmediated control group had mixed infection of gastro-intestinal helminth and the mean EPG was 5350, 5310, 5360 for first, second and third week respectively. The result of the present study indicated that single dose Doramectin at the dose rate of 1 ml/ 50 kg had an outstanding efficacy against the gastrointestinal helminthes (Galdhar *et al.*, 2003 ; Panda *et al.*, 2002). The efficacy of Fenbendazole in present study at

dose rate of 7.5 mg/kg body weight per animal administered orally. It revealed the cent percent efficacy on 21st day of treatment. Sreedevi *et al.*, (2001) ; Lyons *et al.*, (1989); Yadav and Sadana (1999).

The anthelmintic “ Doramectin” and “Fenbendazole” used in this study revealed that doramectin had a wide range of antiparasitic activity as compared to fenbendazole, well tolerated and no evidence of drug associated toxicity was noticed in any of the treated animal (Panda *et al.*, 2002).

References

1. Galdhar, C.N., S.R. Upadhyay, M.Roy, Tiwari, S.K. Maiti and S.Roy (2003): *Ind.Vet. J.* **80**: 583-584.
2. Lyons, E.T., J.H. Drudge and S.C. Tolliver (1989): *Proceeding of Helminthological society of Washington.* **56(1)**: 33-34.
3. Mahesh Kumar, P.S. Banerjee and Harpal Singh (2002): *Indian Jour. of Vet. Med.* **22(2)**: 103-104.
4. Panda S., Ghosh R.C., Nema R.K. and Roy S. (2003): *Indian Vet. J.*, **79**: 604-605.
5. Sreedevi and Md. Hafeez (2001): *Indian Vet. J.* **78**: 170-171.
6. Yadav, C.L. and Sadana J.R (1999): *Indian Vet. Parasitol.* **13(1)**: 23-26

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Madhya Pradesh government bans buffalo fights

India News </news/india_news> By IANS

Bhopal : The Madhya Pradesh government has banned buffalo fights held in the state during the festive season, a government source said Saturday.

In a letter written to the joint director, veterinary services, Ujjain, the Madhya Pradesh animal husbandry department has said that such “shows” should be stopped and action taken under Prevention of Animal Cruelty Act 1960.

“These buffalo fights violate the Prevention of Cruelty to Animals Act, 1960, which specifically prohibits inciting animals to fight and organising animal fights.”

People for the Ethical Treatment of Animals (PETA) had written to the chief minister in November 2007 urging him to take steps to check such fights in which the buffaloes were being forced to participate until they were bloody, injured and exhausted.

To prove their point, PETA also enclosed clippings of newspapers from Ujjain where most such fights were organised by the Yadav Samaj on the occasion of Dusshera.

“In these horrific spectacles, bulls are put into rudimentary rings where they gouge each other with their horns and hooves”, PETA India campaigns coordinator Sachin Bangera told IANS by phone from Mumbai.

“Spectators goad the animals, beat on drums and cymbals, and try to work the animals into a frenzy as they vie to win televisions, MP3 players or clocks while buffaloes suffer serious injuries and many of them die. The fights also put people at risk as the buffaloes sometimes run amok, forcing spectators to run for safety,” he said. http://www.indianmuslims.info/news/2008/mar/01/madhya_pradesh_government_bans_buffalo_fights.html