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COMPARATIVE EFFICACY OF ZANIL (ICI), TRODAX (M & B) AND DISTODINE (PFIZER) AGAINST FASCIOLIASIS IN TEDDY GOATS

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ABSTRACT

Comparative efficacy of three commonly available antifaciolistic drugs, Zanil (ICI), Trodax (M & B) and Distodine (Pfizer) was studied in Teddy goats. Sixty female goats of almost the same body weight and age were divided at random into four equal groups. Each of the three groups received one of the drugs, while the fourth was kept as control. The drugs were administered according to the recommendations of the manufacturers, i. e., 15mg per kg body weight each of Zanil and Distodine orally and 10 mg per kg body weight of Trodax, injected subcutaneously. Average eggs per gram of the faeces were counted for all of the groups on 0, 7th, 14th and 21st day of the treatment. A progressive decrease in the average egg count in the treated groups was found, while it remained almost the same forthe control group. Distodine (96.5%) gave the best results followed by Zanil (92.0%) and Trodaz (90.0%) as calculated by percent decrease in the average faecal egg count on the 21st day. Single dose treatment, if practised regularly, should be sufficient.

INTRODUCTION

Treatment of different diseases in modern veterinary practice is not enjoying the importance it once had. Now major emphasis is being laid on the preventive side. The scientific methodology of preventive medicine can be practised only when certain groups of domestic animals are raised on modern commercialized patterns with the best available animal husbandry techniques. In a developing country like Pakistan, preventive measures cannot be adopted because, except for a few animal farms, whole of the animal population is being raised in rural areas without any scientific or commercial schemes. Therefore, in areas where animals do not have access to regular pastures ,the only

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regular treatment becomes rather important. These days profit margins are narrowing, thus survival of the animal raisers depends on the least possible production cost, of which, expenses of medication make a significant part. The goat *Capra hircus* is an important source of meat and milk. In 1980 goats produced 406,000 tons of milk and 85,000 tons of meat in Pakistan (Haider, 1982). The present study aimed at evaluation of the best antifascioliatic drug for Teddy goats.

MATERIAL AND METHOD

The study was conducted on a flock maintianed under conditions prevelent in a rural area near Lahore. Of 150, sixty naturally infected adult female goats, exhibiting clinical symptoms of fascioliasis, confirmed by faecal examiwere used. These animals were divided randomly into 4 equal groups and were identified by putting numbred steel tags on their necks. Zanil and Distodine were given orally at the rate of 15 mg per kg body weight to the goats in Groups A and B, respectively. The goats in Group C were given subcutaneous injection of 20% w/v solution of Trodax (administered at the rate of 10 mg per kg body weight), whereas the goats in Group D served as control. Faecal egg countings were carried out on O, 7th, 14th and 21st day of the treatment by McMaster egg counting technique as described by Kelley (1974) for all of the sixty goats. For this purpose the faecal samples were collected per rectum and were stored in 10 % formaline in numbered polythene bags. Body weight of the animals was recorded on zero and 21st day of treatment. Observations were also made for any side effects.

RESULTS AND DISCUSSION

Distodine, showing 96.5% efficacy, proved to be the most effective antifascioliatic drug in Teddy goats followed by Zanil and Trodax, showing 92.0% and 90.0% efficacy, respectively, as was found by the percent decrease in the average number of *Fasciola eggs* per gram of faeces on the 21st day of the treatment. The average number of *Fasciola* eggs per gram of faeces as observed on O, 7th, 14th, and 21st day post-treatment. Percent efficacy of each drug has been shown in Table 1.

Table 1. *Number of fasciola eggs per gram (epg) of faeces and percent efficacy of drugsu used*

Group	Treatment	O day of treatment		7th day post-treatmet		14th day post-treatment		21st day post-treatment	
		epg	efficacy (%)	epg	efficacy (%)	epg	efficacy (%)	epg	efficacy (%)
A	Zanil	380	—	120	68.4	53	86.0	27	92.9
B	Distodine	373	—	86	77.0	40	89.3	13	96.5
C	Trodax	373	—	134	64.1	60	84.4	37	90.0
D	Control	367	—	—	380	380	—	380	—

Distodine, showed consistently better efficicacy than either of the Zanil and Trodax. This finding was not in agreement with the results reported by Ijaz *et al* (1983). They used the same drug in sheep and found Distodine occuping the second position with 90.41% efficacy. However, as regards the percentage efficacy of Zanil and Trodax the findings of this study are almost in agreement with those of Ijaz *et al.* (1983).

Body weight showed no significant change and none of the goats developed any side effects. Three goats showed signs of mild itching at the site of injection of Trodax. However, no additional treatments was given. All the drugs used, i. e., Distodine (Pfizer), Zanil (ICI) and Trodax (M & B), showed more than 90.0% antifascioliatic efficacy as was proved by the percent decrease in the average faecal egg number on 21st day. It may be concluded that administration of any of these drugs can be helpful for the treatment of fascioliasis in Teddy goats.

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