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**EFFECT OF SYNANTHIC (OXFENDAZOLE) AGAINST  
NATURAL INFESTATION OF SHEEP WITH  
GASTRO-INTESTINAL PARASITES**  
(With Two Tables)

By

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تأثير السينانك على الطفيليات المعوية والمعوية للأغنام

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أعطى عقار أوكسفندازول بشكل محلول (سينانك) عن طريق الفم بجرعة 5 مجم/كجم إلى 50 خروف مصابة طبيعياً بأنواع عديدة من الديدان الخيطية المعوية ولوحظ أنه في اليوم السابع بعد العلاج قد حدث إنخفاض بنسبة 100% في عدد بويضات البراز لهذه الديدان في جميع الحيوانات المعالجة عند مقارنتها بتلك التي لم تعالج. وفي اليوم الـ 25 بعد العلاج تغيرت الإختلافات الموجودة في صورة الدم وعادت تقريباً إلى معدلاتها الطبيعية كما في الحيوانات السليمة.

**SUMMARY**

\* Synanthic (oxfendazole) suspension as one of the broad spectrum antihelminths drug was orally administered in a dose of 5 mg/kg body weight to 50 naturally infested sheep of (8-24 months age) with gastrointestinal parasites.

The faecal parasitic egg count ceased completely after 7 days post administration of synanthic drug.

The haemogram picture retained to its normal level after 35 days of treatment.

**INTRODUCTION**

Worm infestation is considered one of the most important troubles of our domestic farm animals. Treatment of the infested animals with medicaments is one of the most reliable method for controlling such infestation.

The occurrence of different genera and species of helminth parasites in stomach and intestines of sheep was studied by many authors all over the world. The most important genera recovered were *Ostertagia* spp., and *Trichostrongylus*. *Haemonchus*, *Strongyloides*, *Cooperia*, *Nematodirus* spp., *N. battus*, *Bunostomum*, *Chabertia*, *Trichuris* and *Oesophagostomum* were less frequently occur, (MARTIN, 1983).

\* Produced by Mycofarm Ireland LTD, Ballyboggan industrial Estate, Dublin II.



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Field trials on disinfestation showed that oxfendazole in a dose 5 mg/kg has beneficial effect on removal of all round as well as tape worms from sheep at all ages and under varying climatic and husbandary conditions (LEIMBACHER, et al. 1976; BAKER and FISK, 1977; DOWNEY, 1977). It was also found to be good effect against common gastrointestinal round worms, lung worms and tapeworms (*Monezia* spp) of Cattle (AVERKIN, et al. 1975; CHALMERS, 1977, 1978 and DOWNEY, 1976).

The present investigation was performed in order to estimate the efficiency of synanthic on the gastrointestinal parasites of sheep. The haematological picture of the infested animals with the different species of the parasites was also determined.

### **MATERIAL and METHODS**

A total of 60 indigenous Egyptian sheep aged 8-24 months were collected from different localities at Assiut Governorate. Of these 50 were proved parasitological to be infested with different species of the gastrointestinal parasites, and used for determination of disinfesting power of synanthic by oral administration of one dose only of such drug (5 mg/kg. body weight). Blood as well as faecal samples were collected from each animal, blood samples were obtained twice times, one directly before the administration of the drug and the other 7 days of the treatment. The faecal samples were collected weekly for 5 weeks.

The other 10 sheep were used as control. Of these five are infested with the internal parasite and the other proved to be free of infestation with such parasite.

#### **I. Haematological examination:**

Blood samples were collected from the jugular vein of each animal. Bottles containing "E.D.T.A." Ethylene diamine tetra acetic acid, as anticoagulant were used for collection of such samples, Haematological picture of each animal, total leucocytic (T.W.B.Cs), total erythrocytic (T.R.B.Cs) count, packed cell volum "P.C.V", Haemoglobin content, "HB", and differential leucocytic count were determined according to SCHALM (1979).

#### **II. Parasitological investigation:**

Faecal samples were collected from each animal before and after 7, 14, 27, 28, 35 days of administering synanthic drug. Small plastic bags were used for collection of faecal specimens, flotation and sedimentation technique, (BENBROOK and SLOSS (1955) was adapted.

III. Statistical analysis of the obtained data was performed according to the method of snedecor and COCHRAN (1967).

### **RESULTS**

Are presented in Tables 1 & 2.



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## DISCUSSTION

It is clearly evident from our results that sheep were infested with varying degrees by different species of parasites including *Trichostrongylus*, *ostertagia*, *Haemonchus*, *Nematodirus*, *Chabertia* and *Ascaris*. The average number of parasitic eggs was found to be 850 pergram of faecal matter.

Periodical faecal examination of the treated sheep with the oral administrations of one dose synanthic (5 mg/kg body weight) revealed that the gastrointestinal worm eggs ceased completely after 7 days of treatment. Consequently the signs of the parasitic infestation including severe emaciation, diarrhoea, depraved appetite, pale mucous membrane, bottle jaw, weak and rapid heart beats and roughened coat had markedly disappeared from treated animals as compared with those used as control. This is clearly evident after 35 days from administration of synanthic, a result which are mainly attributed to the lethal effect of such drug on Helminth parasites.

The results tabulated in Table (1) showed a high significant variation in Total erythrocytic count and haemoglobin content between both healthy and infested sheep this obtained data is more or less similar to that recorded by BLUNT (1975). On the other hand leucocytosis associated with both eosinophilia and monocytosis were observed in the infested sheep as compared with the healthy ones, a result which is coincide with that previously recorded by COLES (1980).

Table I & II also indicate that the haemogram picture of diseased animals returned to its normal value 35 days after treatment, same results were observed in goats by MICHAEL, *et al.* (1979) but after two months.

From the results achieved we can safely conclude that the oral administration of one dose of synanthic (5 mg/kg B.wt), was found to be fo lethal effect on the helminth parasites of sheep.

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Table (1)  
 Blood picture in case of infested & non infested sheep

Parameters	Infested animal		Non infested
	Before treatment	After treatment	
Total R.B.Cs T/L	3.9 $\pm$ 1.1**	8.9 $\pm$ 1.5	8.1 $\pm$ 1.2
Total W.B.cS G/L	14.4 $\pm$ 0.8**	11.2 $\pm$ 0.5	11.2 $\pm$ 0.8
P.C.V. %	36 $\pm$ 3.5	35 $\pm$ 1.2	34.0 $\pm$ 2.2
Hb gm %	3.7 $\pm$ 0.3	12.4 $\pm$ 0.3	12.2 $\pm$ 0.5

T/L : Tena / Liter ( $\times 10^{12}$ )

G/L : Giga / Liter ( $\times 10^9$ )

\*\* : Highly significant (P/0.01)

N/S : Non significant variations.



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Table (2)  
Differential leucocytic count in case of infested  
and non infested sheep

Parameters	Infested animals		Non infest
	Before treatment	After treatment	
Band cell %	3.7±0.5	5.8±2.3	3.5±0.2
Neutrophil %	29.8±0.6	30 ±1.2	32.5±0.5
Esoin %	11.3±0.5**	8.1±2.1	6.9±0.5
Lymph %	46.8±0.4	47.9±0.1	49.6±1.3
Mono %	12.1±0.8**	8.2±1.2	7.5±0.5

## SUMMARY

A technique for obtaining differential counts of the leucocytes was described. The technique for collection of the leucocytes from the sheep was described. The results of the differential counts of the leucocytes in the case of infested and non infested sheep were compared. The results showed that the leucocytic count of the infested sheep was significantly higher than that of the non infested sheep. The results also showed that the leucocytic count of the infested sheep was significantly higher than that of the non infested sheep after treatment with Synanthic.

## INTRODUCTION

Parasites of the ruminants have been a problem for many years. The most common parasites of the ruminants are the nematodes, the cestodes, the trematodes, the protozoa, and the ectoparasites. The most common ectoparasites of the ruminants are the ticks, the fleas, and the lice. The most common nematodes of the ruminants are the stomach worms, the lungworms, and the small strongyles. The most common cestodes of the ruminants are the tapeworms. The most common trematodes of the ruminants are the liver flukes and the lung flukes. The most common protozoa of the ruminants are the coccidia and the cryptosporidia.

Synanthic is a new anthelmintic drug which is effective against the most common parasites of the ruminants. It is a broad spectrum anthelmintic which is effective against the nematodes, the cestodes, the trematodes, the protozoa, and the ectoparasites. Synanthic is a new anthelmintic drug which is effective against the most common parasites of the ruminants. It is a broad spectrum anthelmintic which is effective against the nematodes, the cestodes, the trematodes, the protozoa, and the ectoparasites. Synanthic is a new anthelmintic drug which is effective against the most common parasites of the ruminants. It is a broad spectrum anthelmintic which is effective against the nematodes, the cestodes, the trematodes, the protozoa, and the ectoparasites.