

*Department of G.Parasitology and Helminthology.
Veterinary Faculty, Ankara, Turkey.
Prof. Dr. Nevzat Güralp*

THE EFFECT OF DRONCIT ON DOG AND CAT TAPE- WORMS

N.Güralp*, Y.Tiğın, T.Oğuz, R.Tınar and A.Burgu

Summary : Droncit is found 100 % effective against *E.granulosus*, *T.hydatigena* and *D.caninum* in dogs and *H.taeniaeformis* and *J.pasqualei* in cats.

Kedi ve Köpek Şeritlerine Droncit'in Etkisi

Özet : Yurdumuz evcil karnivorlarında şeritler geniş bir yayılış alanına sahiptir. Bunlara ilâveten gerek evcil ve gerekse yabani etcillerde görülen olgun *Echinococcus granulosus*'dan ötürü Türkiye'de gevişenlerde ve insanlarda sık halde kist hidatid'lere rastlanmakta ve bu durum hem ekonomik hem de halk sağlığı açısından problemler doğurmaktadır.

Bu çalışmanın amacı, köpek ve kedilerde görülen şeritlere karşı Droncit'in antelmantik etkisini saptamak olmuştur. Bu suretle, özellikle bir zoonose karakteri gösteren *Echinococcus granulosus*'a karşı yeni ve etkili bir ilâç olduğu bildirilen bu antelmentigin niteliklerini belirliyerek, sonuçları ilgili meslektaşlarımıza duyurmayı yararlı gördük.

Droncit, suni olarak 20.000 *E.granulosus* protoscolex'i ile enfekte edilmiş 10 köpek üzerinde denenmiştir.

Droncit, gerek olgun gerekse genç *E.granulosus* taşıyan köpeklerde 5 mg./kg. hesaplanarak kullanılmış ve ilâcın her iki grup köpekteki bu sestodlara etkisinin % 100 olduğu saptanmıştır. Aynı ilâç yine suni olarak *Taenia hydatigena* ile enfekte beş köpekte 1 mg./kg. hesaplanarak kullanılmış, otopsi sonucunda etkisi % 100 bulunmuştur.

Dipylidium caninum'la doğal olarak enfekte bir köpeğe 2.5 mg./kg. hesaplanarak verilen Droncit'in ise etkisi yine % 100 olmuştur.

Aynı ilâç *Hydatigera taeniaeformis*'le suni olarak enfekte edilmiş kedilerde 1 mg./kg. hesaplanarak kullanılmış, otopsi sonucunda etkisi tam bulunmuştur.

Joyeuxiella pasqualei ile 23 günlük enfekte iki kedide ilâç 2.5 mg./kg., birisinde ise 1 mg./kg. olarak kullanılmış, bu kedilerin otopsileri sonucunda etki yine tam görülmüştür. Aynı parazitile doğal enfekte kedilere Droncit her kilograma 2.5 mg. hesaplanarak kullanılmış, etki % 100 bulunmuştur.

*Faculty of Veterinary Medicine, Department of General Parasitology and Helminthology, Ankara, Turkey.

İlacın yüksek dozlarının yan tesirlerini saptamak için köpeklerin her kilosuna 10 mg. kedilerin ise 5-10 mg. vererek yaptığımız deneylerde bu hayvanlarda klinikman saptanabilen herhangi kötü bir tesir görülmemiştir.

Alınan bu sonuçlarla, Droncit'in gerek köpek ve gerekse kedilerdeki önemli beş sestod türüne yüksek bir etki gösterdiği anlaşılmıştır.

Bu sonuçlar, özellikle kist hydatid'in fazlasıyla yaygın olduğu yurdumuzda ve gelişmekte olan diğer bazı ülkelerde bu hastalığın savaşı ve kontrolünde ümit verici bir dönüm noktası olacağına bizi inandırmaktadır.

Distribution of tapeworms in dogs and cats is wide in Turkey (1). So we always interested in new products which claimed to be effective against cestodes of domestic animals.

Various anthelmintics which are found in Turkish market, showed different actions against different tapeworms of dogs and cats (1). So we decided to investigate the effect of Droncit to above mentioned parasites of the domestic carnivores.

Materials and Methods

The drug was tested in 15 dogs against *Echinococcus granulosus*, in 8 dogs against *Taenia hydatigena* and in 9 cats against *Hydatigera taeniaeformis* which were infected artificially.

Each of fifteen dogs was infected with 20.000 *E. granulosus* protoscolices of ovine origin, eight dogs with 5 *Cysticercus tenuicollis* of sheep origin, and cats with 5 *Cysticercus fasciolaris* obtained from albino mice.

The drug also tested in one dog naturally infected with *Dipylidium caninum* and in 8 cats six of which were artificially infected with *Joyeuxiella pasqualei* and the remaining two naturally infected with the same tapeworm.

Each of the six cats was infected by feeding 35 *J. pasqualei* cysticercoids obtained from naturally infected lizards, *Hemidactylus turcicus*.

Droncit was used in tablet form in dogs. In order to regulate the exact dose rates in cats, we preferred to use the drug by dissolving the tablets in water.

No special diet or fast were applied to the test animals before the treatment.

All animals with the exception of two cats in *J. pasqualei* group, were sacrificed seven days after the treatment.

Results

The efficiency of Droncit against different tapeworms of dogs is shown in table I.

TABLE I.

No. of Dogs	Tapeworms	Dosage (mg/kg)	No. of tapeworms recovered at necropsy	Efficiency (%)
7	<i>Echinococcus granulosus</i>	5	0	100
3	<i>Echinococcus granulosus</i>	5	0	100
1	<i>Echinococcus granulosus</i>	Control	1823	—
1	<i>Echinococcus granulosus</i>	Control	1911	—
1	<i>Echinococcus granulosus</i>	Control	2371	—
1	<i>Echinococcus granulosus</i>	Control	2800	—
1	<i>Echinococcus granulosus</i>	Control	5880	—
5	<i>Taenia hydatigena</i>	1	0	100
1	<i>Taenia hydatigena</i>	Control	3	—
1	<i>Taenia hydatigena</i>	Control	4	—
1	<i>Taenia hydatigena</i>	Control	5	—
1	<i>Dipylidium caninum</i>	2.5	0	100

During the time of treatment, in the first *E. granulosus* group which consists of seven dogs, the tapeworms were 94 days old and sexually mature, whereas in the second group, the tapeworms were 54 days old and were not fully developed.

Five dogs in *T. hydatigena* group were treated soon after the detection of eggs in their faeces.

Within the dose ranges we used, not any adverse effect of the drug has been observed in the dogs.

At necropsy, in all cases 17-124 ascarids (Either *Toxocara canis* or *Toxascaris leonina*) were found in the intestines of the treated animals.

Table II. shows the effect of Droncit against different tapeworms in cats.

All 6 cats were carrying mature *H. taeniiformis* on the day of their treatment.

In *J. pasqualei* group, the first three animals were treated on 23th day of their patency.

TABLE II.

No. of Cats	Tapeworms	Dosage (mg/kg)	No. of tapeworms recovered at necropsy	Efficiency (%)
6	<i>Hydatigera taeniaeformis</i>	1	0	100
1	<i>Hydatigera taeniaeformis</i>	Control	2	—
1	<i>Hydatigera taeniaeformis</i>	Control	2	—
1	<i>Hydatigera taeniaeformis</i>	Control	2	—
2	<i>Joyeuxiella pasqualei</i>	2.5	0	100
1	<i>Joyeuxiella pasqualei</i>	1	0	100
2	<i>Joyeuxiella pasqualei</i>	2.5	0	100
1	<i>Joyeuxiella pasqualei</i>	Control	27	—
1	<i>Joyeuxiella pasqualei</i>	Control	29	—
1	<i>Joyeuxiella pasqualei</i>	Control	32	—

As mentioned above, the last two cats from this group were naturally infected with *J. pasqualei*, and after treatment, their faeces examined with weekly intervals for one month. No ova, egg capsules or any segment were seen during these examinations.

At necropsy 1 18 *Toxocara mystax* were recovered from the treated cats.

No side effects were observed in these animals within the dose ranges of Droncit we used.

To understand the side effects of higher doses in dogs and cats, 5–10 mg./kg. of Droncit were used in these animals. No clinical symptoms were seen in the animals during one week period of observation.

Discussion

The results we obtained from the experiments, we reached the conclusion that Droncit is an ideal anthelmintic against common dog and cat tapeworms. Specially for the control of *Echinococcus granulosus* in dogs, this new product will open a new turning point. So in the countries where hydatidosis is a severe problem, the drug will help to eradicate the infection both in man and in animals.

References

- 1- **Güralp, N.** (1974) : *Helminoloji*. Vet. Fak. Yayın. Ankara Üniv. Yayın. No. 307, Sahife 196–265.

Yazı "Dergi Yazı Kuruluna" 2.3.1976 günü gelmiştir.