

THE INCIDENCE OF PARASITES DISEASES BETWEEN THE STREET DOGS FROM BIHOR IN 2011

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Abstract

These are chronic intestinal helminthosis, asymptomatic, or, rarely with digestive and general manifestations, generated by the development of several species associated or singular with cestodes of the Cyclophyllidea order. Some etiological agents have a big zoonotic importance, producing severe diseases to humans, other have as intermediary hosts farm animals, producing important economic losses to these units.

Key words: zoonoses, street dogs, symptoms

INTRODUCTION

The etiological agents are contained in the family of *Taeniidae*, *Dilepididae*, *Mesocestoididae*.

Of the *Taeniidae* family – characterized by a rectangular shape, rather longer than wider of the oviger proglottids and opening of the lateral genital pores, irregular, alternated.

The *Taeniae* in mature form develops in the small intestine. The eggs are similar, of oval shape, with a thick shell, containing a hexacanth embryo. It measures 30-50 / 35-30 cm.

Of the *Dilepididae* family, *Dipylidium caninum* is the one which parasites, with dimensions of 20 – 80 cm, and the oviger proglottids measure 6-7 / 3 mm, having the shape of melon seeds. The oncospheres, of 40 – 50 μ m, are situated in capsules. The adults infest both carnivores and humans. Intermediary hosts are fleas (*Pulex* and *Ctenocephalides*) and the lice (*Trichodectes canis*) to which, *Cryptocystis trichodectes* are formed(2,3).

Of the *Mesocestoididae* family one may find: *Mesocestoides lineatus*, which measures 0.3 – 2 m length, has an unarmed scolex, and the oviger proglottids, with the shape of small barrels, have the size of 4-6 / 2-3 mm, intermediary hosts, first are the pasture mites and the coprophagous insects, to which there is formed the cysticeroid larvae, and the second intermediary host – birds, rodents, insectivores – to which, there is formed the *Tetrathyridium*, producing the parasitary ascites .

The *Taeniae* develop in the small intestine of dog, fox, wolf, cat and other carnivores, fixing itself with the rostrum, hooks and suction cups, discontinuing eliminating one or more oviger proglottids. The elimination

rate, variable from one species to another, is produced in an interval of few days. At the *T. taeniaeformis*, the elimination are made at 4 – 5 days. Disintegrated on the soil, there are egg released which are ingested by extremely different G.I. – insects, mites, birds, mammals – and then, under the influence of the digestive juices, there is released the hexacanth embryo, which crosses the intestinal wall and “Via hematogen” it fixes itself in the preferred organs. The C.D. contamination is made per os (oral administration), by consuming infested organs (liver, lung, brain, muscle, and others) or insects (fleas), with larva forms.

The prepatent period, within extremely large limits, is of 1 – 21 days in *D. caninum* (*Mesocestodes*) or even more, of 35 – 53 days (*T. ovis*, *T. pisiformis*, *T. taeniaeformis*) and 60 – 80 days in *T. hydatigena*, *T. echinococcus*. The longevity of taeniae has also great amplitude, of 7 years, in *T. ovis*, in dog; of 7 – 34 months in *T. taeniaeformis*, in cat; of 11 – 12 months in *T. hydatigena*; of 4 – 24 months of *T. echinococcus*, but the fertility is higher in the first years, then it declines(1, 4). The teniosis are spread on all continents, with a higher incidence in the dog populations around zootechnical farms, slaughterhouses, in sheep dogs (*T. multiceps*, *T. echinococcus*, *T. hydatigena*) in hunting dogs (*T. pisiformis*) or in apartment dogs (*Dipylidium*).

The contamination sources are dogs, with prevalence of 12 – 25% but also the wild carnivores are of interest – fox, wolf – as well as the cat – for *D. caninum* and *T. taeniaeformis*, eliminators of oviger proglottids. The infestation may be mono-specific, with few taenae (1 – 5), poly-specific, but the infestations with *D. caninum* are stronger of few tenths of samples, and with *T. echinococcus*, of the order of hundreds of samples. The spreading mechanisms are dependent also of the prevalence of the intermediary hosts or the intensity of the infestation. In pulicides and *Trichodectes* there were found over 50 *Cryptocistis* per sample, and in ruminant the incidence of hydatidosis is high on all meridians, constituting important contamination sources.

The number of eggs in a proglottis varies from 500 to over 1.000. The carnivores form dangerous sources for the human, with risk of diseases of hydatidosis, cenurosis. The fact that the eggs are infested in the moment of expulsion of the fecal matters, amplified the risk of contamination. The resistance of the eggs of the different species of taenae depends of the intersection of the medial factors, ovicide effects having the drought and the heat oscillations. On soil, on dryness, the eggs of the *T. multiceps*, *T. pisiformis*, remain viable for 10 – 15 days, but the ones of *E. granulosus*, a season of grass. At moderate cold or under a layer of snow, with mild winters, the eggs of many species resist up to 4 – 7 months. The direct action of the solar radiations destroys them in 1 – 3 days, at a heat of

60°C most of the eggs are destroyed in 10 minutes. The receptivity targets on one side the G.D., and on the other one, the intermediary host. The epidemiologic information reveal o big susceptibility of dogs and a moderate one in foxes, wolves, and within the species, the young ones are more receptive than the adults, especially towards *D. caninum*. In cats, the incidence related to their behavior is higher in adult ones. At the other G.D. the role of age is not mentioned, but the receptivity is influenced also by the state of maintenance, stressors, infestation rate, imuno-status, and other.

MATERIALS AND METHODS

The researches were performed on homeless dogs from Bihor county, and especially from the city of Oradea, in 2011, between April – October, on a number of 100 dogs.

The dogs were captured in different areas of the city and they were divided in 3 lots, on age category, as follows: lot A: young dogs up to 1 year; lot B: adults between 1 – 8 years; lot C: between 8 – 14 years. During the experiment, the dogs were at the shelter for homeless dogs of Oradea. Regarding the setting of a certitude diagnosis, there was used the microscopic examination when proglottis is found in the faeces.

The proglottis are examined under the microscope, between the blade and disc, and the presence of the ovigere capsules is specific for *D. caninum*. The moderate infestations in dogs are passing by without any symptoms, but the strong infested young carnivores manifest weakness, anemia, under the conditions of conservations or even of exaggeration of appetite. It appears the coprostase, abdominal bloat, with gastric sensibility. Especially in dipilidosisi there is frequent also the anal pruritus, when animals crawl (slide) with their posterior on the soil. In youth of ameliorate races there appears the epileptiform crises, amaurosis, and vomiting. The supervision of defecation makes the diagnosis easy, by fining the proglottis in the excrements, as they are mobile, of white color, having the aspect of rice or even bigger. The teniosis evolves chronically for months.

RESULTS AND DISCUSSIONS

Out of the 100 dogs which have taken part in the experiment and divided in the 3 lots, A, B, C on age basis, the highest factor of the taeniae presence was found in lot A, namely in young dogs, in a proportion of 80%.

Regarding lot B, with ages between 1 – 8 years, the highest factor was of 50%, and from lot C, with ages between 8 – 14 years, the presence of

the taeniae was of smaller proportion as it was in lot A and B, namely in lot C, the factor was of 25% from this lot.

CONCLUSIONS

The presence of the taeniae was found in a higher proportion in the young homeless dogs than in the adult and old ones. Being considered zoonose with an aggressive impact on human's health, it is imposed the counter fight of vagabondage of homeless dogs. As prevention and counter fight measurements, all dogs were disinfected according to the valid legislation.

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