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▣ BRIEF COMMUNICATION

Prevalence of *Toxocara canis* in Dogs, North West Bank of Palestine

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Abstract: This study was performed to investigate the prevalence of *Toxocara canis* in local districts in North West Bank of Palestine. Fecal samples from 132 dogs were collected in Nablus, Tulkarm, and Jenin cities from September 2008 to April 2009 and examined for *T. canis* eggs with the floating technique. The overall infection rate of toxocariasis in dogs was 36.4%. The dogs less than 6 months old showed higher infection rates than those older than 12 months ($P = 0.04$). Vigorous interventions are necessary, such as routine coprological examinations of dogs and prescription of anthelmintics to infected dogs.

Key words: *Toxocara canis*, dogs, prevalence, Palestine

This study was to investigate the prevalence of *Toxocara canis* in the districts of North West Bank, Palestine. The districts were Nablus, Tulkarm, and Jenin. Samples were collected from September 2008 to April 2009. A total of 132 dogs (pet and shepherd dogs) of different ages were subjected. Dogs were of local breed which is mixed-breed. The ages of dogs were obtained either from their owners or determined by dentition analysis. Some samples were collected directly from dog rectums or soon after defecation. A 5 g fecal sample was mixed with a solution of zinc sulfate, and the standard floating method was used to detect the parasites. Microscopic examaminations were performed to detect *T. canis* eggs. All data were analyzed with the z-test.

The overall infection rate of dogs with parasites was 36.4%. The dogs less than 6 months old were highly affected followed by the dogs of 6-12 months old and those older than 12 months. The infection rates for the above age groups were 52.3% (23/44), 34.3% (11/32), and 25.0% (14/56), respectively. The dogs younger than 6 months showed higher infection rates than the dogs older than 12 months ($P = 0.04$). The infection rate of dogs of 6-12 months old was not significantly different to that of dogs older than12 months old. The infection rate was higher in rural areas than downtown cities (Table 1). However, only the infection rate in a rural area of Jenin district was significantly higher than that in the downtown of Jenin ($P = 0.002$). The infection rates in rural areas of Nablus, Tulkarm, and Jenin were 41.4%, 40,0%, and 64.0%, respectively. The infection rates in the downtowns of the 3 cities were not significantly different, with values of 14.3%, 16.7%, and 22.2%, respectively.

The present study showed that most infections were associated with dogs at younger ages less than 6 months old. This can be explained by infection of these dogs through transuterine route or lactogenic stages [1]. Dogs at this age might lack immunity and become more susceptible to infection [2]. The higher infection rate in rural areas can be explained by the fact that these villages host the largest population of sheep and herds, so that a large number of dogs are raised. Dogs move with herds to different regions carrying the parasite infection.

It is concluded that toxocariasis of dogs is prevalent in Norh

Table 1. The infection rate of *Toxocara canis* in dogs, from 3 cities of North West Bank of Palestine from September 2008 to April 2009

Area	No. dogs examined	No. positive (%)
Nablus, downtown	21	3 (14.3)
Nablus, rural area	36	15 (41.7)
Tulkarm, downtown	12	2 (16.7)
Tulkarm, rural area	20	8 (40.0)
Jenin, downtown	18	4 (22.2)
Jenin, rural area	25	16 (64.0)
Total	132	48 (36.4)

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West Bank of Palestine, and there is a high risk of infection, especially in infants. In this area, urgent interventions are necessary, such as routine examinations of dogs to detect *Toxocara* infection and prescription of anthelmintics to infected dogs.

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