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HAEMOPROTEUS COLUMBAE INFECTIONS AND PSEUDOLYNCHIA CANARIENSIS INFESTATIONS IN PIGEONS IN ISTANBUL, TURKEY

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İstanbul'da güvercinlerde Haemoproteus columbae ve Pseudolynchia canariensis'in yaygınlığı

Özet: Eylül 2000 ve Şubat 2001 arası İstanbul'da 4 semtte 5 farklı kümeste/çatıda bakılan 118 erişkin evcil güvercinden (*Columba livia*) %43.2'si *Haemoproteus columbae* ile enfekte, %17.8'i *Pseudolynchia canariensis*'le enfeste bulunmuştur.

Anahtar Kelimeler: Güvercin, Columba livia, Haemoproteus columbae, Pseudolynchia canariensis, Yaygınlık, İstanbul, Türkiye

Summary: Out of 118 domestic pigeons (*Columba livia)* reared in 5 different pigeon houses/roofs in 4 districts of İstanbul between September 2000 and February 2001, 43.2% were found to be infected with *Haemoproteus columbae* and 17.8% to be infested with *Pseudolynchia canariensis.*

Key Words: Pigeon, Columba livia, Haemoproteus columbae, Pseudolynchia canariensis, Prevalence, Istanbul, Turkey

Introduction

Two *Haemoproteus* species, *H. columbae* and *H. sacharovi*, occur in pigeons. Their gamonts are found in red blood cells. The gamonts of *Haemoproteus columbae* develop from tiny forms to elongate, crescent-shaped gamonts, which partially encircle the nucleus of the host cell. The host cell's nucleus may be displaced but not to the edge of cell. The mature gamonts of H.sacharovi completely fill the host cell. They distort it and push the host cell's nucleus to one side.

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The vector of *H. columbae* is *Pseudolynchia canariensis*. Both *H. columbae* and *P. canariensis* are widely distributed in the world, especially in warm and temperate climates (4).

Haemoproteus columbae and its vector, *P. canariensis*, are present in Turkey (1-3, 5). The literature on this subject is summarized in Table 1. There are not any studies on the presence and prevalence of *H. columbae* and the prevalence of *P. canariensis* in pigeons in İstanbul.

Tablo 1. Summary of information on Haemoproteus columbae and Pseudolynchia canariensis in pigeons in Turkey

Ref. and its year	City	No of pigeons infected with H.col./Examined	Infection rate	No of pigeons infested with P.can./Examined	Infestation rate	No of P.canariensis	Intensity of infestation*
(2) 2001	Ankara	114 / 200	57%				
(5) 1972	İzmir	69 / 98	70.4%				
(1) 1999	Ankara			25 / 200	12.5%	39	1.56
(3) 1963	İstanbul			+**	?	+**	?

(*) Intensity of infestation = No of P.canariensis / No of infested animals
(**) No of infested pigeons and no of flies not given

Material and Methods

In this study, 118 adult domestic pigeons (*Columba livia*) reared in 5 different pigeon houses or roofs in 4 districts of İstanbul were examined for *Haemoproteus* spp and *Pseudolynchia canariensis* (the pigeon louse fly) between September 2000 and February 2001 (Table 2). Firstly, whole bodies of pigeons were inspected and the pigeon louse flies were taken into 70% alcohol. Blood films were prepared for each pigeon inspected. The films were fixed in methanol for 2 minutes and were stained with Giemsa stain for 25-30 minutes. The identification of species was done according to the literature (4).

Results

Haemoproteus columbae and *Pseudolynchia canariensis* were found in this study. The results are given in Table 2.

Discussion

In Turkey, it was reported that *Haemoproteus columbae* was seen in 70.4% of 98 pigeons in İzmir (5), in 57% of 200 pigeons in Ankara (2); and *Pseudolynchia canarien-*

Tablo 2. Number of pigeons examined and infected (or infested) with H. columbae (or P. canariensis); prevalence rates of parasites; minimal, maximal and total number of P. canariensis; intensity of infestations of P. canariensis

Districts of pigeon houses/roofs	Month	No of pigeons infected with H.col./Examined	Infection rate	No of pigeons infested with P.can./Examined	Infestation rate	Min-Max no of P.can.	Total no of P.can.	Intensity of infestation*
Bayrampaşa-1	09/2000	1 / 16	6.25%	0 / 16	0%	0	0	-
Bayrampaşa-2	09/2000	15 / 24	62.5%	1 / 24	4.17%	1	1	1
Yenibosna	11/2000	12 / 20	60%	15 / 20	75%	1-3	25	1.67
Güneşli	11/2000	23 / 32	71.9%	5 / 32	15.6%	1-2	8	1.6
Beylikdüzü	02/2001	0 / 26	0%	0 / 26	0%	0	0	-
Total		51 / 118	43.2%	21 / 118	17.8%	1-3	34	1.62

(*) Intensity of infestation = No of P.canariensis / No of infested animals

sis in 12.5% of 200 pigeons in Ankara (1) and in pigeons (infestation rates not given) in İstanbul (3).

In this study, these two parasites were found to be with the following infection/infestation rates in 118 pigeons: *Haemoproteus columbae* (43.2%) and *Pseudolynchia canariensis* (17.8%).

Kaynaklar

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