

Prevalence of Ectoparasites, Gastrointestinal Parasites and Blood Protozoan Infection of Pigeon in Chattogram Metropolitan Area, Bangladesh



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Roll No. : 0120/02

Reg. No. : 785

Session : 2020-2021

A thesis submitted in the partial fulfillment of the requirement for the degree of Masters of Sciences in Parasitology

Department of Pathology and Parasitology

Faculty of Veterinary Medicine

Chattogram Veterinary and Animal Sciences University

Khulshi, Chattogram -4225, Bangladesh

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AUTHORIZATION

I do hereby declare that, I am the sole Author of the thesis entitle as “**Prevalence Of Ectoparasite, Gastrointestinal Parasite and Blood Protozoal infection in Chattogram Metropoliton Area, Bangladesh**” here under the department of Pathology and Parasitology, Chattogram Veterinary and Animal Sciences University (CVASU). I also authorize the CVASU to lend this thesis to other institutions or individuals for the purpose of scholarly research. I also authorize CVASU to reproduce the thesis by photocopying or by other means in total or in part, at the request of other institutions or individuals for the purpose of scholarly research.

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Md Moazzem Hasan Mamun

December 2022

Dedicated
To
My Beloved Parents

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Abstract

A cross sectional study was done with the aim to estimate prevalence of ectoparasite, gastrointestinal parasite and blood parasite infections in pigeons (*Columba livia*) in different parts the Chattogram metropolitan area in Bangladesh. A total of 130 pigeons were checked for ectoparasites, gastrointestinal parasites and blood protozoa. The analysis was conducted between the dates of 1 July 2022 to 31 December 2022 at the Department of Pathology and Parasitology, Chattogram Veterinary and Animal Sciences University, Chattogram. For identification of gastrointestinal parasite we performed direct smear, sedimentation technique and simple floatation method and for morphological identification of ectoparasite I used microscope and giemsa stain for blood protozoa. All acquired information was entered into a Microsoft Excel spreadsheet and analysed using SPSS version 13. The study found that 59.2% of pigeon had ectoparasites on their skin. Out of 4 different ectoparasites identified, *Lipeurus caponis* (38.5%) caused the most infections. *Columbicola columbae* (31.5%) and *Menopon gallinae* (23.1%), which were more common than *Menacanthus stramineus* (15.4%). Four species of gastro-intestinal (GI) parasites were identified, including *Ascaridia sp.*, *Capillaria sp.*, *Heterakis sp.*, and *Syngamus tracheae*. *Ascaridia sp.*, *Capillaria sp.*, *Heterakis sp.*, and *syngamus trachea* had respective prevalences of 37%, 33.8%, 17%, and 5.4%. The prevalence of GI parasites was 62.31% and 45 (34.6%) pigeons had blood protozoa. Two species of protozoa, including *Haemoproteus sp.* (21.5%) and *Leucocytozoon sp.* (13.10%) were identified. The epidemiological study showed that the number of pigeon with parasites in their GI tract, ectoparasites, and blood protozoa was pretty high during the study period. Housing, sex, and deworming all might have a big effect on the prevalence rate. Thus, more epidemiological studies are needed to determine Chattogram district pigeon parasitic infection.

Key Words: Ecto-Parasites, Gastrointestinal Parasites, Blood Protozoa, Pigeon, Prevalence

