Faculty of Veterinary Medicine
Department of Parasitology

Dissertation for master's degree in parasitology

Title:

Investigating cryptosporidium infection in native birds (chickens, turkeys, pigeons) in Zabul city

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Abstract

Cryptosporidium is a parasitic protozoan from the genus Epicomplexa which leads to disturbances in the digestive system and the occurrence of diarrhea or involvement of the respiratory system. Cryptosporidium is one of the important common parasites in livestock, poultry and humans, which is of great importance both in terms of health and economy. The present study was carried out in order to investigate the level of cryptosporidium infection in native birds (chickens, turkeys, pigeons) of Zabul city.

In this study, 534 fecal samples from each native bird, including 260 samples from native chickens and roosters, 139 samples from turkeys, and 135 samples from pigeons were collected from the suburbs of the city. The samples were first precipitated by formalin-ether method and microscopic enlargements were prepared from the precipitate obtained, then they were stained by the modified Zil-Nelson method and studied with a light microscope.

Based on the results obtained from the investigated samples, in 11 cases samples taken from birds were found to be infected with Cryptosporidium parasite. The frequency of infection was 3.6%, 0.3% and 0.8% in turkeys, pigeons and chickens (chickens and roosters), respectively. According to the obtained results, the highest level of contamination was observed in turkeys, but there is no statistically significant difference between different groups of birds.

The highest Cryptosporidium infection was observed in birds in the age group of more than one year. A significant statistical relationship was observed between the sex of the female and the frequency of contamination. Also, the amount of pollution in winter season was more than other seasons. And in terms of the place of storage, the highest level of contamination was observed in birds kept in a closed space. The results of this study showed that the infection with cryptosporidium in native turkeys of Zabol city is higher than other native birds, so it is necessary to conduct more studies in this field and provide appropriate solutions related to the prevention and control of this disease.

Keywords: Cryptosporidium, Zabul, Poultry, Turkey, Pigeon