NASHIK DISTRICT'S HELMINTHES PARASITES OF LOCAL CHICKENS

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ABSTRACT

The purpose of the study on the prevalence of helminthes infections in domestic chickens in Nashik was to gather data on the species makeup and prevalence of these illnesses. For eight months, two hundred chickens one hundred males and one hundred females were gathered every week and examined for helminthes parasites. An overall infection rate of 85.6% was noted. containing the following nematodes and cestodes: Raillietina tetragona , Raillietina echinobothrida, Raillietina cesticillus, Choanotaenia infundibulum, Ascaridia styphlocerca, Heterakis brevispiculum, Subulura brunmpti , Gongylonema congolense, and Raillietina tetragona . The incidence of infection did not differ significantly between the sexes. Infection with trematodes was not noted in this investigation.

Keywords: Nashik, Local Chickens, Prevalence, Helminthes

INTRODUCTION

Exotic chicken breeds are used in modern poultry production and management in Nashik, with great focus on these practices. In spite of this, native breeds account for the majority of chickens consumed in the nation.

exclusively raised as free-range animals in the countryside, especially in northern Naishiki where modern poultry agriculture is still in its infancy

According to Gadzama & Strivastava (1986), exotic chicken breeds didn't seem to be as tolerant to the high temperatures and dry conditions present in the northern regions. They also deduced that while native breeds have adapted to these conditions, a significant percentage of foreign breeds perish from heat stroke during hot periods.

However, a number of issues prevent the poultry business from growing to its full potential. Diseases and ineffective management practices are some of these factors. The main poultry diseases are reason for chicken production's financial loss (Oluyemi & Rober, 1979).

In poultry, intestinal parasitism is a prevalent issue, particularly in birds raised in intensive systems. Every worm that was gathered was kept alive in 10% formalin. The worms were then cleaned, mounted in lacto phenol, and examined under a compound microscope to determine their identity.

Ascaridia species were identified using the standards established by Mozgovi (1953) and Lamaire (1936).The Gongylonema description was derived from the works of Lamaire (1936) and Fain (1955). Using the standards established by Lamaire (1936) and Soulsby (1965), heteroakis and subulura were distinguished. The majority of the criteria used

According to Ajayi & Ajayi (1983), helminthiasis is the main factor preventing profitable livestock and poultry production in a number of nations, including Nigeria.

Additionally, Fabiyi (1983) noted that helminth poses a significant risk to poultry management and results in significant financial losses.

MATERIALS AND METHODS

The digestive systems of 200 adult domestic chickens that were killed nearby were gathered.

The tracts that were gathered were stored differently for both sexes. Without delay, the specimens were brought to the lab for examination and analysis. In the lab, every gut was spread out on a tray, with each section labelled and tied with thread. The alimentary tract was then divided into sections and put in individual Petri dishes that were labelled. The dishes were then gently rinsed to release the contents. After washing, the lining membrane of each tract was scraped off.

Using a binocular dissecting microscope, the remaining organs in the body were examined for parasites. Identify tapeworm species were those outlined by Reid (1962) and Lamaire (1936).

RESULTS

174 (85..6%) of the 200 birds who had their helminth parasites checked had infections from various species. The parasites that were found included five species of cestodes, Raillietina echinobothrida Megnin 1880, Raillietina tetragona Molin 1858, Choanotaenia infundibulum Bloch 1779, Raillietina magninumida Jones 1930, and Raillietina cesticillus Molin 1858, as well as four species of nematodes, Ascaridia styphlocerca Stossich 1904,

Gongylonema congolense Fain 1955, Heterakis brevispiculum Gentdre 1911, and Sublura brumpti Lopez-Neyra 1922. Numerous birds carried multiple types of helminth parasites.

Frequency of species-

Table 1 displays the species' percentage prevalence along with their geographic distribution. In contrast to Ascaridia styphlocerca, which was uncommon and rare, the most commonly encountered nematodes in the survey were Gongylonema congolense, H. brevispiculum, and S. brumpti. The most prevalent helminth parasite was cestodes. Rare species included C. infundibulum, whereas the most common species were R. echinobothrida, R. tetragona, and R. cesticillus.

TABLE 1: PREVALENCE OF HELMINTH SPECIES AND SITE OF RECOVERY IN BIRDS EXAMINED.

Parasite	Location	No. of birds infected	% infected
Ascaridia styphlocerca	Intestine	9	4.5
Heterakis brevispiculum	Caeca	39	18
Gongylonema congolense	Crop	81	40.5
Raillietina echinobothrida	Intestine	84	42
Raillietina tetragona	Intestine	77	38.5
Raillietina magninumida	Intestine	16	8
Subulura brumpti	Caeca	31	15.5
Choanotaenia infundibulum	Intestine	7	3.5
Raillietina cesticillus	Intestine	21	10.5

DISCUSSION-

This study has demonstrated that a significant number of helminth parasites severely parasitize household poultry in Nashik. One aspect of this survey revealed no trematode infestation in any of the birds inspected, which is in line with the findings of multiple workers in various regions of Northern Nashik. These worms may have vanished because of their intricate life cycles, which call for at least an aquatic intermediate host. The life cycle is being disrupted by the lack of water, which is stopping the worms from spreading.

The current survey did not find Davainea proglottina, a common tape worm found in many places of the world. This conclusion is consistent with previous studies by Fabieyi (1972), Gadzama & Strivastava (1986), and Luka & Ndams (1987).

2007; Yoriyo et al. 2005; Adang et al. 2008) notwithstanding Oyeka's (1989) report of 3.3% parasite prevalence in chicken in the state of Anambra. Certain arionidid and limacidid slugs as well as hellucilid, zonidid, physidid, and succineidid snails serve as the intermediate hosts for this little tapeworm (Fabiyi 1972). There's a chance that these are uncommon or nonexistent in this region of the nation.

Among the nematodes that are known to be common in chickens, Capillaria sp. was not identified in this investigation either. This further supports the findings of Gadzama & Strivastava and Fabiyi (1972).

Luka & Ndams (2007), Yoriyo et al. (2005), Oyeka (1989), Fatihu et al. (1991), and (1986). It was unable to determine why this parasite did not exist. Fabiyi (1972) reported more cases of Ascaridia and Heterakis sp. than this study does. One explanation would be the origin of the birds he studied, which could have come from a deep litter system that encourages infection with these species.

The report's generally high prevalence rate may be caused by the fact that, unlike in the past, birds kept in free range are no longer typically fed grains in the morning the formative years) prior to leaving for grazing. The current state of the nation's economy may be to blame for the absence of this practice. As a result, the birds begin to feed more intensely on the invertebrate hosts, which raises their risk of contracting diseases from species that need an intermediate host. This statement is supported by the high percentage prevalence seen in the majority of cestodes and Gongylonema congolense, which need dung beetles and cockroaches as intermediate hosts. According to a study, male and female domestic hens are equally susceptible to illnesses. But the reduced frequency seen in women compared to men.

Because most farmers take good care of them by giving them food and water to compensate for the time spent during incubation, it is possible that the female birds in the current study reduced their feeding range during the incubation period and concentrated more on the grains and food remnants being served to them, thereby reducing the chances of infection. Male birds also go farther in quest of food, which raises the risk of infection.

REFERENCES

Ajayi, S. A. & Ajayi, S. T. 1983. Incidence of Blood and Gastro intestinal Parasites in Domestic Animal on Jos Plateau In proceeding of National Workshop on Disease of Livestock and Poultry held at National Veterinary Research Institute, Vom 24-27 January pp17-18

Adang, K. L.; Oniye, S. J.; Ajanusi, O. J.; Ezealor, A. U. & Abdu, P. A. 2008. Gastrointestinal Helminths of the Domestic Pigeons (Columba livia domestica Gmelin, 1789 Aves: Columbidae) in

Zaria, Northern Nigeria. Science World Journal 3 (1):33-37.

Akinwumi, J. A.; Adegege, A. J.; Olayide, S. O. & Ikpi, A. E. 1979. Report on Economic Analysis of Poultry. Federal Livestock Department Magazine Lagos.

Fatihu, M. T.; Ogbogu, V. C.; Njoku, C. O. & Saror, D. I. 1991. Comparative Studies of Gastro intestinal Helminths of Poultry in Zaria, Nigeria. Revue de elevage et de Medicine veterinaire des pays Tropicaux 44 (2), 175-177.

Gadzama, E. N. & Strivastava, G. C. 1986. Prevalence of Gastrointestinal Parasites of Market Chickens in Borno State, Zaria Veternary 1:126-128.

Gadzama, E. N. & Strivastava, G. C. 1986. Prevalence of Gastrointestinal Parasites of Market Chickens in Borno State, Zaria Veternary 1:126-128.

Fain, P. A. 1955. Legenre Gongylonema au Congo Belge et Ruande – Urindi Annale de Parasitologie 30 (3): 203-218.

Yoriyo, K. P.; Fabiyi, J. P.; Panda, S. M. & Adamu, S. U. 2005. Intensities of Helminth Parasites of Free-Ranging Chickens in Bauchi and Environs. Yankari Journal 2: 135-139.