GASTROINTESTINAL PARASITES IN HUNTING DOGS IN ZARIA

BY

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INTRODUCTION

- Dogs perform a range of cultural, social and economic functions in the society.

- They are kept as pets and companions, for hunting, as guards, working animals, for food, or commercial purposes

- Wildlife hunting is presumed to have dated back to the time of human evolution (Lawal *et al.*, 2013).

- Hunting was a crucial component of hunter-gatherer societies before the domestication of livestock and the dawn of agriculture, beginning about 11,000 years ago.

INTRODUCTION

- Parasitic diseases account for important health hazard in humans and animals around the globe (Panigrahi *et al*., 2014).

- Dogs are known to be infected by different gastrointestinal parasites.

INTRODUCTION CONT'D

- Gastrointestinal helminthiasis is the most commonly encountered disease in dogs and also acts as a major constraint in dog rearing across the globe (Traub *et al.*, 2007).

- Despite the beneficial effects of keeping dogs, close bonds of dogs and humans remain a major threat to public health.

STATEMENT OF RESEARCH

- Parasitism is the most commonly encountered disease in dogs all over the world (Dejene *et al*., 2013)

- The prevalence of parasites considerably varies from one region to another (Robertson et al., 2000).

STATEMENT OF RESEARCH

- The unwholesome attitude of hunters during hunting, competing for dirty streams of water and food with their dogs (Lawal *et al*., 2013) leaves them vulnerable to a diverse range of parasites of medical and veterinary importance.

JUSTIFICATION

- Understanding the epidemiology of canine gastrointestinal parasites is important for control program

- Paucity of information on the prevalence of gastrointestinal parasitism among hunting dogs in Zaria

- Clinical laboratory evaluation of faeces from hunting dogs may provide a useful means of diagnosis especially in asymptomatic dogs

AIM OF THE STUDY

- Investigate the prevalence of gastrointestinal parasites infection among hunting dogs in Zaria.

OBJECTIVES OF THE STUDY

- Prevalence of gastrointestinal parasitic infection among hunting dogs in Zaria
- Identify the different species of the parasites
- Determination of the association of age, sex and breed distribution with the prevalence of infection

RESEARCH HYPOTHESES (H_O)

- Gastrointestinal parasitic infection is not prevalent among hunting dogs in Zaria

- There is no significant association between the age, sex and breed of the dogs and the prevalence of canine GI parasitic infection among hunting dogs in the study area.

MATERIALS AND METHODS

- This study was carried out with the consent and full approval of the owners of the dog.

MATERIALS AND METHODS CONT'D

Study area

- Zaria was the selected study area.

- Zaria is located on the geographic co-ordinates of 11°4'00'' N and 7°42'00'' E (Maplandia, 2009).

- A cross sectional study was conducted from April 2015 through May 2015 to determine the prevalence of GI parasitic infection in dogs with no bias towards sex, age and breed of the dogs.

MATERIALS AND METHODS

Study Area

- Samaru, Hayin-dogo and Bomo village were selected as the study area and visited based on accessibility, proximity to the laboratories and high residence of hunters in the areas.

- Samples were collected by convenient sampling technique. Information including age, sex, breed, names of the dogs and owners were carefully recorded. The dogs were categorized based on age , sex and breed.

MATERIALS AND METHODS CONTD

- *Sample size*

A total of 61 hunting dogs were sampled using convenient sampling technique.

- The choice of the dog numbers to be sampled in each study area depended largely on availability and the permission from owners to allow their dogs to be sampled.

MATERIALS AND METHODS CONTD

Sample Collection

- Faecal samples were collected from the rectum of dogs using well labeled and lubricated sterile polythene bags. The faeces were stored in the refrigerator at 4°c until processing (within 48 hours of collection).

MATERIALS AND METHODS

Faecal examination

- The faecal samples were processed by simple floatation methods, using sucrose/zinc sulphate mixture solution (specific gravity 1.28).

- A dog was categorized as positive if at least one egg was seen (Lorenzini *et al.*, 2007), by microscopy.

- The helminth eggs were identified based on their morphology and characteristic identification key described by Soulsby (1982), Uruquart (2003) and Bowman (2009).

DATA ANALYSIS

The prevalence was calculated using the formula below

$$\frac{\text{number of infected individual}}{\text{number of individuals examined}} \times 100$$

- Chi-square was used to determine association between age, sex and breed, and the prevalence of GI parasitism in dogs

RESULTS CONT'D

Table 1 – Age, sex and breed distribution of the prevalence of GI parasites in hunting dogs in Zaria.

	No. sampled	Dogs infected	prevalence (%)	P value	X^2
1. Age					
<1year	41	11	26.83	0.0899	4.816
1-3 years	10	2	20.0		
> 3years	10	6	60.0		
Total	**61**	**19**	**31.15**		
2. Sex					
Male	39	10	25.64	0.2163	1.529
Female	22	9	40.91		
Total	**61**	**19**	**31.15**		
3. Breed					
Local	48	13	27.08	0.1878	1.735
Cross	13	6	46.15		
Total	**61**	**19**	**31.15**		

RESULTS

Sample Demographics

- Age, sex and distribution of the sampled dogs is indicated in Table 1

- However the sex, breed and age distribution of the prevalence of GI parasitic infection in this survey was found to be statistically Insignificant ($P > 0.05$)

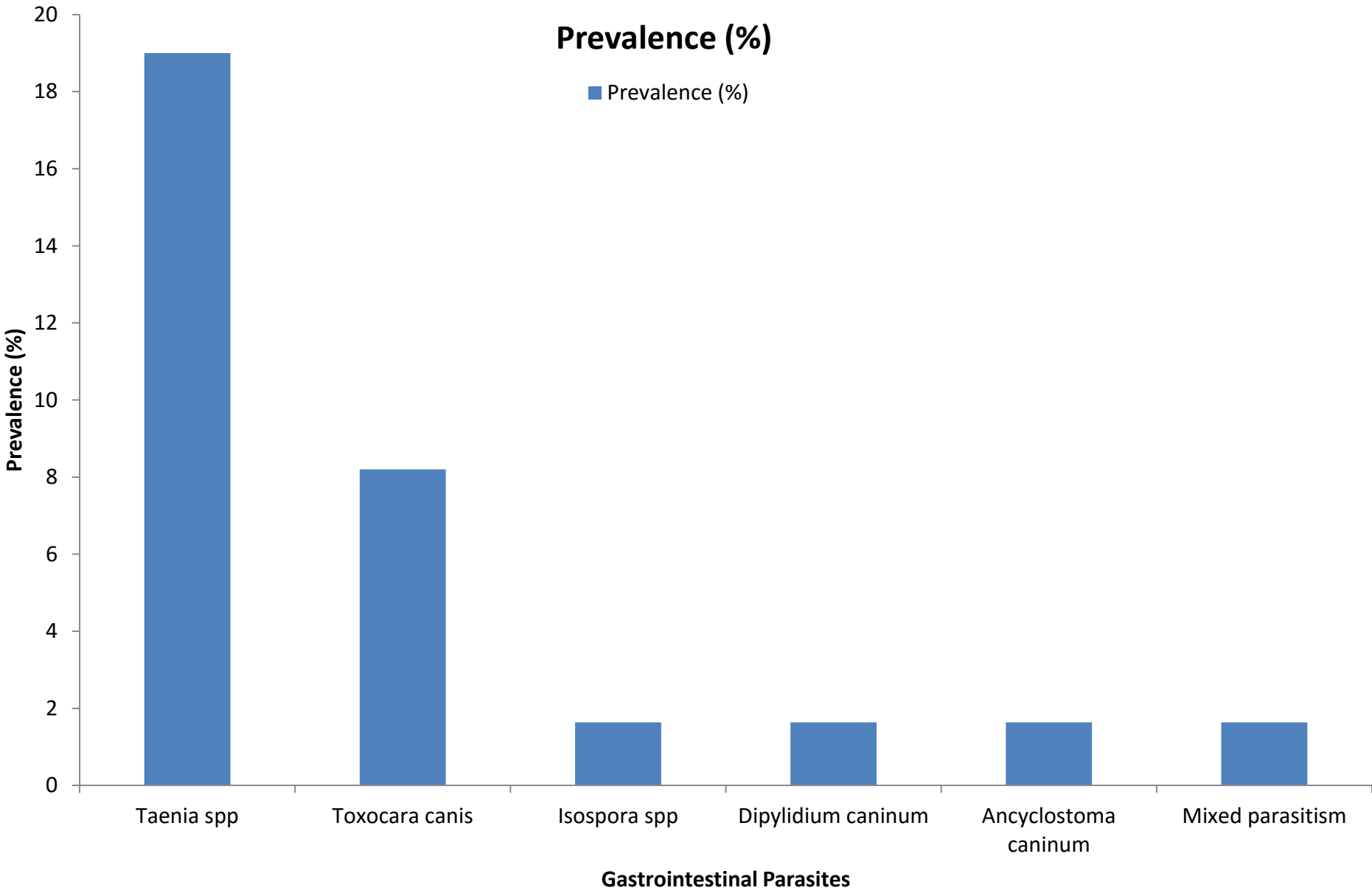

Fig. 2: Prevalence of gastrointestinal parasites in hunting dogs

DISCUSSION

- This study reported prevalence of gastrointestinal parasitism for the first time in hunting dogs in Zaria.

CONCLUSION

- The presence of *Dipylidium caninum*, *Toxocara canis* and *Ancyclostoma caninum* among hunting dogs is of great importance since these parasites are well recognized zoonotic agents, which may constitute significant public health risk due to the frequent contact between humans and dogs.

RECOMMENDATIONS

- Further investigation should be conducted in order to put appropriate control and preventive measures in place.
- Relevant agencies should embark on mass enlightenment of hunters and dog keepers on the role of dogs in disease transmission
- Need to take their dogs for periodic veterinary check up and treatment.

THANK YOU FOR LISTENING