
**PREVALENCE OF CYSTICERCOSIS DUE TO CYSTICERCUS TENUICOLLIS AND
HYDATID CYSTS AMONG SMALL RUMINANT ANIMALS SLAUGHTERED IN
IGANGA MUNICIPAL ABATTOIR**

By



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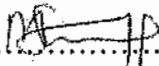
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**A DISSERTATION SUBMITTED TO THE FACULTY OF AGRICULTURE AND
ANIMAL SCIENCES IN PARTIAL FULLFILMENT OF THE REQUIREMENTS
FORWARD OF THE DEGREE OF BACHELOR OF ANIMAL PRODUCTION AND
MANAGEMENT OF BUSITEMA UNIVERSITY**

DECLARATION

I **MWANJA SIMON** hereby declare that this dissertation is my original work and has never been submitted to any other university or institution of higher learning for award of any degree.

Sign..........

Date.....

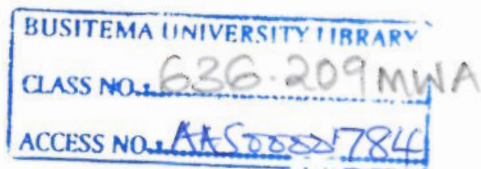
This dissertation has been submitted with approval of the university supervisor, Dr. MATOVU HENRY.

Sign

.....Date.....

DEDICATION

This work is dedicated to my supervisor for the support and encouragement. Thanks for your guidance and endurance, may God reward you abundantly.



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LIST OF ABBREVIATIONS

FAO : Food and Agricultural Organization

UBOS : Uganda Bureau of Statistics

BDCS : Body Condition Score

C : Cysticercus

ABSTRACT

Cysticercus tenuicollis and *echinococcus granulosus* are highly considered to be among the most common tapeworms infecting goats and sheep leading to high degree of morbidity and mortality and also being responsible for significant economic losses especially due to slaughter condemnation in developing countries such as Uganda, Iganga district in particular where sanitation is poor and people live in close proximity with each other and with animals (UBOS, 2009).

The study was conducted to determine the prevalence of *cysticercosis* due *cysticercus tenuicollis* and *echinococcus granulosus* in goats and sheep slaughtered in Iganga district municipal abattoir, Iganga, Uganda. A cross-sectional based survey was conducted, from May 2019 to June 2019, where a total of 212 animal comprising 106 sheep and 106 goats of both sexes were examined at postmortem for the evidence hydatid cysts and *cysticercus tenuicollis* through visual inspection, incision and palpation of organs.

The prevalence of hydatid cysts was 4.7% and 2.8% in goats and sheep respectively and the prevalence of *cysticercus tenuicollis* was 22.6% in goats and 15.1% in sheep. The prevalence of both *cysticercus tenuicollis* and hydatid cysts was observed to be high in old animals than the young ones. With *cysticercus tenuicollis*, the prevalence was observed to be almost the same in both sexes (18.8% males and 18.9% females), well as the prevalence of hydatid cysts was observed to slightly higher in females (4.2%) than males (3.4%). The result of the study revealed that goats were more affected with both hydatid cyst and *C. tenuicollis* as compared to sheep. Higher prevalences were also observed in animals with poor body condition scores in both species. The study revealed that there was a correlation between variables; age and BDCs with the prevalence of both hydatid cysts and *C. tenuicollis* while variable such as sex, species and origin showed no correlation with both *cysticercus tenuicollis* and hydatid cyst. *Cysticercus tenuicollis* were more frequently detected in in the omentum than other visceral organs among the animal examined while hydatid cysts were more in the liver.

In conclusion, the observed high prevalence of the two metacestodes leads to high condemnation rates of visceral organs and also poses a significant public health concerns. Therefore this calls for the need to undertake more extensive epidemiological investigations to determine the casual factor, economic impact, and public health importance of the disease in the livestock sector.

It was recommended that Public education on means of transmission, prevention and control strategies of *echinococcus granulosus* and *cysticercus tenuicollis* is crucial.

1.0 CHAPTER ONE: INTRODUCTION

1.1 Background

Small ruminants constitute a large number of animal populations in developing countries, including Uganda. Their rearing represents an important target of small farmers. The most destructive enemies of these small ruminant animals are parasitic infections that constraint the successful production and play a major role by inducing direct and indirect losses (Khaled, 2012)

The sheep and goats are kept mainly to produce meat, milk, or fiber, amongst others. Dairy goat is considered the cow of the poor due several factors. The goat and sheep eats little, occupies a small area and produces enough milk for the average unitary family, whereas maintaining a cow at home cannot be afforded by the homeowner hence, the increasing popularity of goat as the poor person's cow(Kumar et al., 2010).

Dairy goats produce about 15.2 million metric tons of milk, accounting for about 2% of the world total amount of milk produced by livestock. The developing countries produce approximately 83% of the total amount(Aziz, 2010) .The sheep and goat meat is also highly demanded and consumed in developing and developed countries (Sebsibe, n.d.)

Cysticercus tenuicollis and *echinococcus granulosus* are highly considered to be one of the most common tapeworms infecting sheep and goat leading to high degree of morbidity and mortality (Miran et al., 2017) and also being responsible for significant economic losses , especially in developing countries (Wondimu *et al.*, 2011)

Normally, *cysticercus tenuicollis* are observed during meat inspection as cysts loosely filled with transparent fluid usually found in abdominal viscera and liver of infested animals. The intermediate hosts of *cysticercus tenuicollis* and *echinococcus granulosus* are the ruminants while canines are the definite hosts (Singh., 2015)

Studies conducted in different abattoirs in Ethiopia revealed that parasitic infections including *cysticercus tenuicollis* and *cystic echinococcus* are found to be the major cause of organ condemnation (Kassa, 2012)

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