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**PREVALENCE OF ECHINOCOSIS IN GOATS AND SHEEP SLAUGHERED IN
KOTIDO TOWN COUNCIL ABATTOIR, KOTIDO DISTRICT**

BY

AWILLI EVALINE AKELLO

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everlineawilli@gmail.com




**A DESSERTATION SUBMITTED TO FACULTY OF AGRICULTURE AND ANIMAL
SCIENCES IN PARTIAL FULFILLMENT OF REQUIREMENTS FOR AWARD OF
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MAY 2014

DECLARATION

I AWILLI EVALINE AKELLO do declare that the information in this dissertation is my own work and has never been submitted to any institution of higher learning or university for any academic award.

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APPROVAL

The dissertation has been submitted for examination with the approval of my supervisor

Dr. Mawadri Patrick (BVM)

Department of Animal Production and Management

Faculty of Agriculture and Animal Sciences

Sign.....*P.King*.....Date.....*11/09/2014*.....

DEDICATION

I would like to dedicate this dissertation to my lovely mother Mrs.Ogola Anna Mary, my father Mr.Ogira Michael and to my sister Akech Julie, my brothers, sisters and all friends who played a very fundamental role in my education and encouraged me to go for further studies. Not forgetting my teacher Owino J.B, Ojok H and Ochen Oscar and others who encouraged me and all those who have wished me well.

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List of abbreviation

KTC-----Kotido town council

E g-----*Echinococcus granulosus*

G8-----cervid strain

G1-----sheep strain

G2-----goat stain

PSC-----Protoscoleces

CE-----cystic Echinococcosis

W.H.O-----world health organization

PTA-----percutaneous thermal ablation

D.V.O-----District Veterinary Officer

ABSTRACT

A cross-sectional study was carried out from February to May 2014 to determine the prevalence of echinococcosis in goats and sheep slaughtered in Kotido town council abattoir.

For this purpose, a total of 354 small ruminants 194 sheep and 160 goats slaughtered in the abattoir were examined for the presence of hydatid cysts. Hydatid cysts were detected in 121 (62.4%) sheep and 96 (60.0%) goats examined respectively. Results of the study showed that statistically significant variation was never observed in the prevalence of hydatid cysts between sheep and goats hosts. In the study, 131 (59.8%) males and 86 (63.7%) females were found to harbor hydatid cysts in one or more of their organs. Higher prevalence was recorded in females than males.

An overall prevalence of 65.8% in goats and sheep of ages above 3 years, 65.1% in ages between 2-3 years and 53.0% in ages between 0-1 years of hydatid cysts was recorded. This study showed that the infection rate increases as the age increases; it was found that there was positive correlation between the age of sheep and goats examined and infection rate. It can therefore be concluded that the sheep play greater role in dissemination of the disease and contamination of human in our region.

In view of the findings of the current study, there is a need and recommendations for proper disposal of offals, reduction of back yard slaughtering and control of stray dogs to prevent the spread of hydatid cysts and public health hazards associated with cystic echinococcosis.

Further epidemiological studies on the comparative importance of intermediate hosts, genotype of strains from different hosts' species and zoonotic and economic significance of cystic echinococcosis are urgently needed in different parts of Kotido district

It is therefore necessary that efforts should be made to make the general public aware of the problem even in those areas where the infection has not been reported.

It is also imperative that dog owners should be warned of the dangers of feeding raw offals to dogs since home slaughter is a common practice of the Jie lifestyle of Kotido, The necessity of regular deworming of dogs and the provision of meat inspection services will no doubt greatly contribute to the fight against echinococcosis disease.

CHAPTER ONE: INTRODUCTOION

1.1 Background

Kotido is composed of pastoral community whose livelihoods are heavily dependent on livestock for household consumption, sale and for their family needs. Echinococcosis is one of the major zoonotic parasitic diseases that occur throughout the world and causes considerable economic losses and public health problems in many countries especially kotido, caused by the parasite of the genus *Echinococcus* (Torgerson *et al*, 2003).

The intermediate hosts are mainly herbivores with man as an accidental host while the definitive hosts are mainly dogs and other canids. The disease has two main recognized forms; cystic echinococcosis caused by different species *Echinococcus granulosus* complex and alveolar *Echinococcus* caused by species *Echinococcus multilocularis*.

Other species include, *Echinococcus oligarthra*, *Echinococcus shiquicus*. Recently, a new species of *Echinococcus*, *Echinococcus felidis* was identified in kasese district.

Infection with *Echinococcus granulosus* results in to 10% reduction in the life performance of surviving offspring (Schantz, *et al*, 2010)

In Tunisia, the prevalence reached 10.41% in lambs between 6-12 months, 75.42% in sheep aged 1-2 years and 83.83 to 100% in sheep over 2 years old (Al-Khalidi,*et al*,2004)

In Libya, 25.8% of stray dogs and 21% of owned dogs have been assessed to be positive for echinococcosis while another study found a prevalence of 58% (Kasse.*et al*.2006). A prevalent rate of 1.7% is reported in humans.

Egypt has a prevalent rate of 3.2% in urban areas and 6% in rural areas.

In Kenya, up to about 15% of goats and 13% of sheep harbor the infection (Macpherson, *et al*.2012). While infection rates in livestock varied from 1.7 to 33.4% in sheep, and 0% to 18% in goats

In Kasese, the study revealed the prevalence of 3.9% (Pastore, *et al*, 2003).

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