Uganda Journal of Agricultural Sciences, 2002,7:23-24
Printed in Uganda.
ISSN 1026-0919
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SHORT COMMUNICATION

Cysticercus cellulosae in pigs slaughtered in and around Kampala city

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Abstract

***Cysticercus cellulosae* is the larval form of *Taenia solium*, the pig tape worm. Humans become infected by eating raw or undercooked pork containing the cysts of *C. cellulosae*. When ingested, the cysts spread to other body tissues including subcutaneous and musculature. If located in the brain and the eye they may give rise to epilepsy and loss of vision, respectively**

Keywords: *Cysticercus cellulosae*, pigs, humans infection

Introduction

This study was carried out after realizing that many people were eating roasted pork, much of it not properly prepared, at drinking places in most of Uganda towns. It is hoped that these findings will lead to better management in the rearing of pigs in the country as well as to a more cautious approach to the preparation and consumption of pork.

Methodology

The majority of the pigs slaughtered in Kampala come from the rural areas. During this study each animal on arrival was given an ear tag for identification. After slaughter the carcass was weighed. Then parallel incisions of about 2.5 cm deep and 5 cm long as outlined by FAO(1957) and Gracey(1985) were made across external masseter muscles, muscles of the thigh, shoulder, tongue and visceral organs using a clean sharp blade and pins to expose the delicate translucent and elliptical rice-like cysts which were identified as those of C. *cellulosae* according to the description by Gracey(1985).

Discussion

Of the 297 carcasses examined over a two-months period, 214 came from the central region comprising the districts of Kampala, Masaka, Mpigi and Mubende; none of which had infection. Twenty three of the 83 pigs from Lira contained cysts. One of the sows had 8 foetuses, all of which were infected with cysts.

Unpublished reports have always given the impression that pig cysticercosis is not a problem and in some cases, even non-existent in Uganda. Our present findings indicate that this is not the case. The fact that 33.7% of the 83 pigs from Lira were infected indicates that the prevalence of *C. cellulosae* in the whole of northern Uganda and probably some parts of eastern region is likely to be higher. The number of pigs studied is also not high enough to depict a reliable national status. It is of interest to note that 8 foetuses recovered from a sow infested with *C. cellulosae* were also infested with the later, with one of them containing a total of 32 cysts. Antenatal transmission with pig cysticercosis is not common and has only been occasionally reported (Thornton, 1973).

The intensity of the infestation as judged by the cysts from incisions of jaw and limb muscles varied among animals with an average of 8.5 cysts. This is higher than the recommended critical figure of 7 above which the whole carcass must be condemned as unfit for human consumption in Uganda (Holar,1984). If this recommendation was to be used in our case, 20 of the 28 infected carcasses would have beep condemned. In the present study, however, only six of them with generalized infections were destroyed. This is significant in terms of public health, since it is likely that roasted pork consumed at drinking places may be contain cysts. Therefore, human infection may occur especially among those who prefer to eat "juicy" pork. However, nationally, information on *Taenia solium* is scanty.

The absence of infestation in pigs from the central region and its presence in Lira is probably a reflection of

the way pigs are raised in the two regions. Free range systems of rearing pigs expose the animals to greater risks of picking infection (Thornton, 1973; Campbell,1983 and Sarti *et al.*,1992). In pigs kept or reared in areas where sanitary,and hygienic conditions are poor the incidence of cysticercosis due to *C. cellulosae* may increase. Our observations indicate that most of the pigs in Lira are allowed to roam freely. On the other hand, there is land shortage in the central region and the human population density is higher than in Lira. Consequently, the pigs are either penned or restrained with ropes.

Table 1: Number of cysts from jaw and limb muscle incisions

Range of Cysts	No of carcasses*
1 - 3	3
4 - 6	5
7 - 8	5
10 - 12	6
13 - 15	1
16 - 18	1
19 - 21	1

*Six carcasses had generalized infestation; were condemned and destroyed and are not recorded in the table.

This study has confirmed the presence of cysticercosis in pigs. Proper disposal of human faeces, restricted pig rearing management and thorough boiling/or roasting of pork can control cysticercosis. However, there is need to conduct further investigations in order to ascertain the frequency of cysticecosis and adult tapeworm in human population nation wide. This will enable evaluation of the current public health importance of the infection.

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