

Acknowledgments

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Dedication

To:

My parent
My brothers and sisters,
My colleagues and
friends and all those who
were in touch during this
work.

Motasem

Table of Contents

No.	Subject	Page
	Dedication	I
	Acknowledgement	II
	Table of contents	III
	List of tables	VI
	List of figures	VII
	Abstract	VIII
	ملخص البحث	IX
	Introduction	
	Introduction	1
	Back ground	1
	Synonyms	2
	History	2
	life cycle	3
	Justification	5
	Objectives	6
	Literature Review Chapter One	7
	Literature Review	7
1.1	Classification	7

1.2	Etiology	8
1.3	Description of paramphistoma warm	10
1.4	clinical signs	10
1.5	Diagnosis	11
1.6	Postmortem	12
1.7	Treatment	13
1.8	prevention and Control	13
1.9	Epidemiology	14
1.9.1	Geographic distribution	15
1.9.2	Previous Studies	15
	Chapter Two	30
	Materials and Methods	30
2.1	Study area	30
2.2	Study Design	31
2.3	Sample Size	31
2.4	Individual risk factors	32
2.5	Management risk factors	32
2.6	Animals and sample collection	32
	Survey of paramphistomiasis in slaughter house	32
2.7	Diagnostic techniques	33
2.7.1	Fecal Examination	33
2.7.2	Serological examinations	34
2.7.2.1	Collection and preparation of sera	34
2.7.2.2	Excretory and Secretory (E/S) products Antigen	35
2.7.2.3	Enzyme linked immunosorbant assay (ELISA)	35

	Procedure of Indirect ELISA	35
2.8	Analysis of the results	36
	Chapter Three	38
3.1	Results	38
3.2	Sex of animals	39
3.3	Age of animals	39
3.4	Breed	40
3.5	Body condition	40
3.6	Grazing type	40
3.7	Source of animals	41
3.8	Water source	41
3.9	Presence of snails	42
3.10	Presence of water bodies	42
3.11	Vegetation	43
3.12	Knowledge about disease	43
3.13	Manure disposal	44
3.14	Fasciolaiasis	44
3.15	Schistosomaiasis	45
3.16	Other diseases	45
3.2	Descriptive statistical analysis frequency tables, cross tabulation and association tables between the paramphistomiasis (diagnosed by ELISA) and risk factors	58
3.2.1	Results	58
3.2.2	Sex of animals	58

3.2.3	Age of animals	59
3.2.4	Breed	59
3.2.5	Body condition	60
3.2.6	Grazing type	60
3.2.7	Source of animals	60
3.2.8	Water source	61
3.2.9	Presence of snails	61
3.2.10	Presence of water bodies	61
3.2.11	Vegetation	62
3.2.12	Knowledge about disease	62
3.2.13	Manure disposal	62
3.2.14	Fasciolaiasis	63
3.2.15	Schistosomaiasis	63
3.2.16	Other diseases	63
	Chapter Four	72
	Discussion	72
	Conclusion	77
	Recommendations	78
	Reference	79
	Appendix 1	89
	Appendix 2	97
	Appendix 3	106
	Appendix 4	112
	Appendix 5	120

List of Tables

Table No.	Contents	Page
Table 3.1.1	Distribution of paramphistomiasis infection among 156 cattle examined by fecal sedimentation test in Rabak slaughterhouse	38
Table 3.1.2	Summary of frequency distribution of 156 cattle from Rabak slaughterhouse examined for paramphistomiasis by fecal sedimentation test according to potential risk factors	47
Table 3.1.3	Summary of cross tabulation for the rate of paramphistomiasis in each category of the potential risk factors in 156 cattle from Rabak slaughterhouse examined by fecal sedimentation test	50
Table 3.1.4	Summary univariate analysis for The association between paramphistomiasis and potential risk factors in 156 cattle examined at Rabak slaughterhouse by fecal sedimentation test using the Chi_square test	53
Table 3.1.5	multivariate analysis for The association between paramphistomiasis and potential risk factors in 156 cattle examined at Rabak slaughterhouse by fecal sedimentation test	56

List of table Continued :

Table No.	Contents	Page
Table 3.2.1	Distribution of paramphistomiasis infection among 156 cattle examined by ELISA test in Rabak slaughter	58
Table 3.2.2	Summary of cross tabulation for the rate of paramphistomiasis in each category of the potential risk factors in 156 cattle from Rabak slaughterhouse examined by ELISA teest	65
Table 3.2.3	Summary univariate analysis for the association between paramphistomiasis and potential risk factors in 156 cattle examined at Rabak slaughterhouse by ELISA test using the Chi_square test	68
Table 3.2.4	Multivariate analysis for The association between paramphistomiasis and potential risk factors in 156 cattle examined at Rabak slaughterhouse by ELISA test	71

List of figures

Figure No.	Contents	Page
Figure 1	Planorbid snails, the intermediate host for stomach	4

	fluke	
Figure 2	Life cycle of <i>paramphistomum</i>	5
Figure 3	Mature <i>Paramphistomum sp</i>	9
Figure 4	Calf scouring due to stomach fluke infection. Note emaciated condition of animal	11
Figure 5	Satellite picture for the study area, A: GeziraAbba, B:Asalaia Suger company, C: Rabak Town, D: Kenana Suger company, E: Kosti town	30
Figure 6	Eggs of <i>Paramphistomum cervi</i> (P) and <i>Fasciola Hepatica</i> (F)	34

Abstract

A cross-sectional study was carried out on 156 cattle in Rabak, White Nile State, Sudan, during the period from marsh to June 2013. The objectives were to estimate the prevalence of paramphistomiasis in cattle and to investigate potential risk factors associated with the disease. The overall prevalence of cattle paramphistomiasis in White Nile state (Rabak) was found to be 29.5% when tested by fecal sedimentation test and 53.2 %

when tested by Enzyme Linked Immunosorbent Assay (ELISA) test.

In the current study, univariate analysis using the Chi-square, with a confidence interval of 95% at a *p-value* of ≤ 0.25 was used to identify potential risk factors associated with fecal sedimentation test-positivity for paramphistomiasis infection in cattle. Significant risk factors associated with fecal sedimentation positive in the univariate analysis were found to be breed ($X^2 = 4.437$, $p = 0.035$), body condition ($X^2 = 6.918$, $p = 0.009$), grazing type ($X^2 = 6.367$, $p = 0.012$), snail presence ($X^2 = 10.6$, $p = 0.001$), water bodies ($X^2 = 2.934$, $p = 0.231$), knowledge of owner about disease ($X^2 = 1.656$, $p = 0.198$), manure disposal ($X^2 = 3.508$, $p = 0.06$), and other disease ($X^2 = 4.468$, $p = 0.035$). Significant risk factors associated with being ELISA positive in the univariate analysis were found to be sex ($X^2 = 2.725$, $p = 0.112$), water source ($X^2 = 5.166$, $p = 0.076$), vegetation ($X^2 = .428$, $p = 0.064$), manure disposal ($X^2 = 4.646$, $p = 0.031$), *shitiosoma* ($X^2 = 1.782$, $p = 0.182$), and Other diseases ($X^2 = 2.311$, $p = 0.128$).

The multivariate analysis, using logistic regression, with a confidence interval of 95% and a *p-value* of ≤ 0.05 was used to assess the association between identified significant risk factors in the univariate analysis in combination towards a positive fecal sedimentation test status for paramphistomiasis in cattle. The analysis showed an association between being fecal sedimentation test positive status for paramphistomiasis infection

in cattle and breed(Exp (B) = .565, p = 0.035), body condition (Exp (B) = .1.5, p = 0.009),, grazing type (Exp (B) = 2.07, p = 0.012), snail presence (Exp (B) = .092, p = 0.001), and other disease (Exp (B) = 2.17, p = 0.035), For ELISA, the analysis showed an association between being ELISA positive status for paramphistomiasis infection in cattle and cattle drink from river (Exp (B) = .1.365, p =0.023),, and manure disposal. (Exp (B) = .477 , p = 0.031).

ملخص الدراسة

أجريت دراسة مقطعية علي 156 رلس من الأبقار في ولاية النيل الأبيض (ربك), خلال الفترة التي امتدت من مارس الي يونيو 2013 والهدف منها هو تقدير معدل انتشار مرض دودة الكرش في الأبقار والتحقق من عوامل الخطر المرتبطة بانتشار مرض دودة الكرش وكانت نسبة المرض 29% اختبرت باختبار ترسيب البراز. و 53% اختبرت باختبار المقايسة المناعية بالانزيم المرتبط .

بإستخدام مربع كاي للتحليل $p\text{-value of } \leq 0.25$ تم العثور علي عوامل الخطر الايجابية الهامة المرتبطة بالمرض باختبار ترسيب البراز في التحليل وحيد المتغير حيث كانت العوامل هي: السلالة حالة الجسم نوع المرعي مصدر ماء الشرب وجود قواقع وجود البرك معرفة المالك بالمرض إزالة الروث والصابية بالامراض الاخرى كما تم العثور علي عوامل الخطر الايجابية الهامة المرتبطة بالمرض باختبار المقايسة المناعية بالانزيم المرتبط حيث كانت لعوامل هي: الجنس مصدر ماء الشرب الحشائش إزالة الروث مرض الشتيوسوما صابة بالامراض اخرى

باستخدام تحليل الانحدار $p\text{-value of } \leq 0.05$ اظهر وجود ارتباط ايجابي اللوجستي

بين مرض دودة الكرش المشخص باختبار ترسيب البراز والسلالة () وحالة الجسم () ونوع المرعي () ووجود القواقع () وصابية بلمرض اخرى ()

() كما اظهر التحليل وجود ارتباط بين مرض دودة الكرش و مصدر مياه الشرب خاصة الشرب من النهر () وإزالة الروث ()

