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شبكة المعلومات الجامعية التوثيق الالكتروني والميكرو فيلم



شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكرو فيلم

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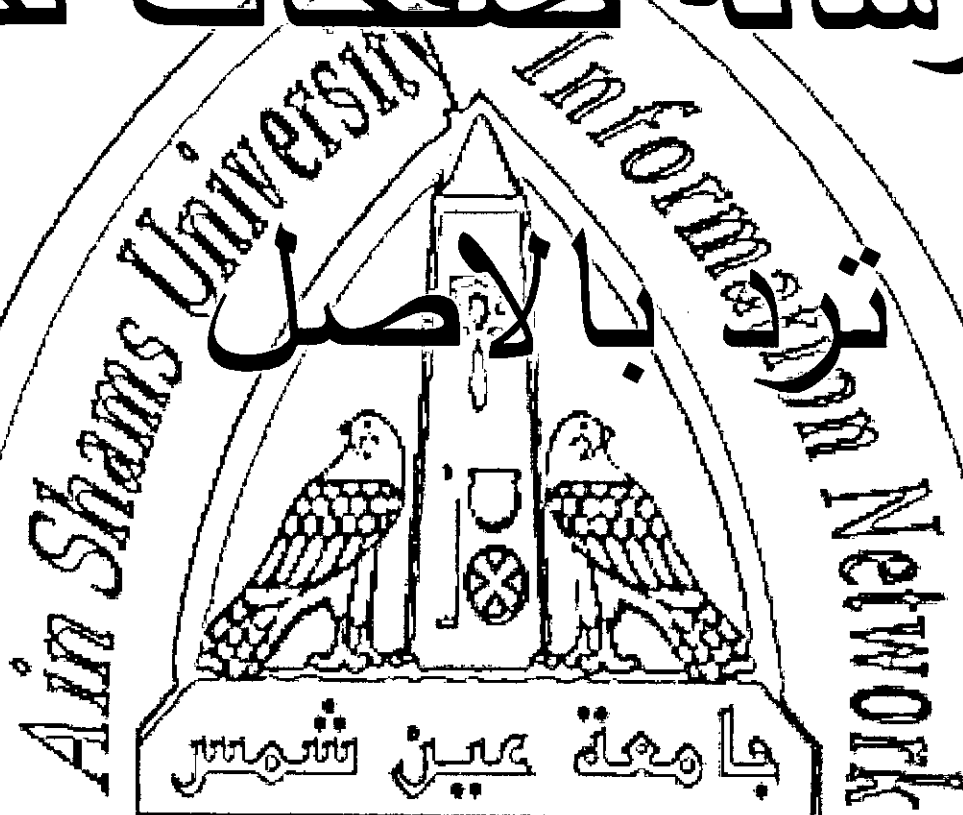
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Cairo University
Faculty of Veterinary Medicine
Department of Zoonoses

EPIDEMIOLOGICAL STUDIES TO ASSESS THE ROLE OF SHEEP AND GOATS IN TRANSMITTING BRUCELLOSIS TO CATTLE AND MAN

Thesis

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For the degree of

M.V.Sc.

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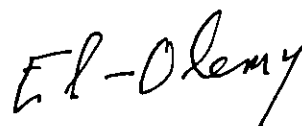
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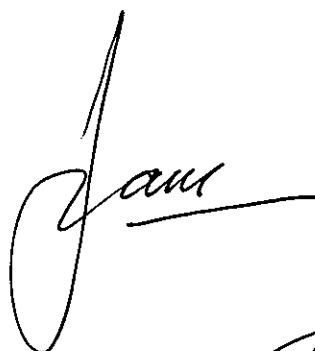
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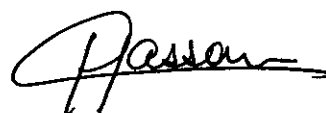
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INTRODUCTION

*Epidemiological studies to assess the role of
Sheep and goats in transmitting brucellosis to cattle and man*

Introduction

The Egyptian economy has historically revolved around agriculture as a main contributor to the gross domestic products, employment and means of livelihood.

The strategic targets of the vertical increase in production of livestock sector (milk and meat) cannot be contemplated without control of animals; breeding diseases. In this context brucellosis is of special importance because of heavy economic losses it causes resulting from abortion, sterility, decreased milk production and cost of culling animals, besides the social and public health impact due to human infection.

Despite significant progress toward eradication in several countries , brucellosis lingers as a world wide health problem for domestic animals and humans .That bucellosis remains a serious zoonotic threat indicates that our scientific understanding of the basic nature of host – parasite – environment interaction has been limited (**Garry, 1990**)

There were many reasons why brucellosis remains endemic .These include expansion of livestock herds and flocks, with associated uncontrolled movements ;lack of veterinary support services and vaccines; and husbandry practices favoring the spread of infection .Human cases continue to occur following

international travel , traditional use of raw milk products and following close contact with infected animals (**Robinson, 2003**).

With the recent application of epidemiological and biostatistical means in the field of veterinary medicine, a new era for measuring the association between the occurrence of a disease and the exposure to risk factor(s) was achieved; and this association could be estimated by numerical values on a biostatistical bases not only by personal observations or qualitative means .

The isolation of 68 strains of *Br.melitensis* from cattle (**Hamdy, 1989**), was an initiating point to study the incidence of such hazardous pathogen in dairy animals and man .

The problem of high incidence of brucellosis infection in sheep and goats remains to be considered. This is alarming as *B.melitensis* has been recorded to be predominant in the cattle and buffalo samples cultured at the end of 1980s (**Refai et al., 1990**) . Since sheep and goats are the main susceptible hosts for *B.melitensis* ,this epidemiological study aimed to assess qualitatively and quantitatively the effect of the direct contact (exposure) of cattle and human with sheep and goats on the occurrence of bovine and human brucellosis respectively , The quantification of the consequence from exposure leads to quantifying the effect of prevention and to plan control programs.

The study on bovine is completely separated from the study on human although most of them were exposed to the same individuals of sheep and goats. Yet there were different ways of

exposure to the risk of infection. Thus the assessment of the risk in cattle did not reflect the situation in human and the result of the study on cattle could be the same as human or completely different.

If we identify those risk factors that are casually associated with an increased likelihood of brucellosis and those associated with a decreased likelihood of brucellosis, then we are in a good position to make recommendations about control , prevention and eradication of brucellosis .

REVIEW OF LITERATURE

*Epidemiological studies to assess the role of
Sheep and goats in transmitting brucellosis to cattle and man*

Review of Literature

Bruce (1887) was the first who succeeded in isolating the organism responsible for Malta fever from the spleen of a dead soldier. He named it *Micrococcus melitensis*.

Zammit (1905) was the first who recovered *Brucella melitensis* from the blood of a milch goat among five goats with a strong agglutination reaction.

Shaw (1906) was the first to report the isolation of *Brucella melitensis* from cattle in Malta.

Dubois (1910 and 1911) recovered *Brucella melitensis* from sheep and recognized it as an important cause of brucellosis in man in southern France.

Basset Smith (1914) found that cow's milk in some cases could agglutinate the *Micrococcus melitensis* organism.

Ivanov and Kolmakin (1959) stated that *Brucella melitensis* could be transmitted from sheep to cows and excreted in cow's milk.