

قسم الرقابة الصحية على الأغذية
كلية الطب البيطري - جامعة أسيوط
رئيس القسم : أ.د/ توفيق البسيوني

دراسة عن مرض البروسيلة في الذبائح بصعيد مصر

علي لطفي ، حسين يوسف ، طلعت الخطيب ، اسماعيل صديق * ،
عبدالخالق الطماوي * ، سميرة الجبالي ** ، محمد جعفر **

تم جمع ٤٣٣٤ عينة من دم الحيوانات المذبوحة ، ١٢٨٥ عينة دم أبقار ، ١٤٣٠ عينة دم جاموس ، ٥١ عينة دم جمال ، ٣٦٨ عينة دم الاغنام ، وقد اظهرت النتائج مايلي :
في الماشية :

٤١ عينة ايجابية بنسبة ٣٢% بمعايير ما بين ١/٤٠ ، ١/٣٢٠ ، ١٢٤٤ عينة سلبية
بنسبة ٩٦.٨٢% .
في الجاموس :

٧ عينة ايجابية بنسبة ٤٨% بمعايير تتراوح ما بين ١/٤٠ ، ١/١٦٠ ، ١٤٤٣ عينة
سلبية بنسبة ٩٩.٥٢% .
في الجمال :

٤ عينة ايجابية بنسبة ٧٨% بمعايير تتراوح ما بين ١/٣٠ ، ١/١٦٠ ، ٤٧ عينة
سلبية ٩٦.٣٢% .
في الاغنام :

لم يستدل على وجود البروسيلة في الاغنام .

تناول البحث التوصيات الواجب اتباعها بالمجازر عند ذبح الحيوانات المصابة

بالبروسيلة والحكم عليها .

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**BRUCELLOSIS IN SLAUGHTERED CARCASSES
IN UPPER EGYPT**
(With 4 Tables)

By

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SUMMARY

A total of 3134 blood sera samples from slaughtered cattle (1285), buffaloes (1430), camels (51) and sheep (368) was analyzed by using Rose Bengal and agglutination tests and revealed that the two tests gave similar results. The presence of Brucella in 3.2%, 0.5% and 7.9 in cattle, buffaloes and camel respectively while brucellosis failed to detect in sheep carcasses.

INTRODUCTION

Brucellosis has economic and public health significance in countries where the disease occurs. The incidence of Brucella among different species of animals differ greatly from one locality to the other, therefore the present work is considered the first trial to study the presence of Brucella in carcasses slaughtered at upper Egypt, consequently this work was planned to secure, i. Incidence of brucellosis among cattle, buffaloes, camels and sheep slaughtered at upper Egypt (El-Minia, Assiut and Kena). ii. Evaluation of the various serological tests in the diagnosis of brucellosis.

MATERIAL and METHODS

Samples:

A total of 3134 sera samples were analysed. Blood samples were taken directly after slaughtering of each animal and during bleeding, in approximately 10ml in "screw capped bottle" and left at room temperature or at 37°C for 1/2 hour then placed in refrigerator for 18 hour. By using Pasteur pipettes serum was removed, and centrifugate at 3000 r.p.m. for 15 minute to remove any residual red cell from it.

Chemical reagents:

Antigen used for the Rose Bengal Plate test (RBPT) was obtained from central Veterinary Lab., New Haw Weybudge, London. While antigen used for the tube agglutination test (TAT) was prepared by the Veterinary sera and vaccines.

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RESULTS

The obtained results were recorded in tables (1, 2, 3, & 4).

DISCUSSION

A) Incidence of Brucellosis

I - Cattle:

In the present study blood sera were collected from cattle slaughtered at Upper Egypt and examined for brucellosis. Out of 1285 samples 750 were collected from male with age less than 3 years and 535 samples were collected from female with age above 5 years tables (1&2).

The results of RBPT & TAT on 1285 cattle blood sera revealed that 41 (3.2%) were positive at varying titres 1/40 to 1/320, while 1244 samples (96.83%) showed negative results. Nearly similar findings were obtained by KULSHRESHTHA, et al. (1973), GIANTIGIS (1981), ABDEL-WAHAB (1985), and ZAGHLOUL and KAMEL (1985) who detected an incidence of brucellosis with percentage of 2.3, 2.4, 2.24 & 2.7 respectively.

The lower percentage obtained in the present study may be to high temperature and lower relative humidity in upper Egypt which may have a good disinfective power against brucella microorganism as they shorten its life in the external environmental condition as stated by NASHED (1977).

II- Buffaloes:

In the present study blood sera were collected from male with age less than 3 years and 837 from female with age above 5 years, Tables (1&3). 7(0.48%) out of 1430 samples were positive at varying titres from 1/40 to 1/160 while 1423 (99.52%) showed negative reaction.

The obtained results pointed that a lower incidence of brucellosis in buffaloes slaughtered at upper Egypt, which may be attributed to that all examined cases with an age above 7 years, mean while buffaloes are less susceptible to brucella infection than cattle (EL-GIBALY, 1969).

III- Camels:

4(7.86%) out of examined camel blood sera were positive, of which 3(9.37%) from female of age more than 5 years and 1(5.26%) from male of age less than 3 years, tables (1&4). Nearly similar results were obtained by NADA (1984) and ZAGHLOUL and KAMEL (1985) who recovered brucellosis with a percentage of 8.21 and 8.11 respectively.

The recovery of brucellosis from camels suggests that it is importance to pay the attention for examination of camels as an important domestic animal in Egypt to control the disease.

IV- Sheep:

All sheep blood sera collected from 179 and 189 female showed negative results table (1) similar finding were obtained by AHMED (1939) and ZAGHLOUL and KAMEL (1985) who failed to detect brucellosis in sheep.

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B) Serodiagnosis

The RBPT as screening test followed by the application of the TAT is the most suitable technique together with the use of Mercaptoethanol test in the detection of the type of infection present in individual animals.

One of the major problems facing investigations applying RBPT on large scale in surveys, is the differentiation between infected and recently vaccinated animals (HUNTER and ALLEN, 1972). False negative and positive results may be encountered when applying TAT alone, so the urgent need for using more than one single test is recommended in order to arrive a confirmatory serological test as stated by CHAPPED, *et al.* 1977).

From the results obtained in this study it is evident that a relatively high number of food animals arrive the slaughter house while being reactors for brucellosis, this initiates the necessity of establishing an Eradication programme on a National level.

Table (1)
Incidence of Brucella positive reactors among
different species of slaughtered animals

Species of animals	Number of animals	RBPT Positive Number	%	TAT Titre			
				1/40	1/80	1/160	1/320
Cattle	1285	41	3.18	1	5	31	4
Buffaloe	1430	7	0.48	1	2	4	0
Camel	51	4	7.86	0	3	1	0
Sheep	368	0	0	0	0	0	0
Total	3134			2	10	36	4

0 : Zero.

Table (2)
Incidence of Brucellosis among cattle

Sex	Total	Less than 3 years				Total	More than 5 years				Total
		Positive No.	%	Negative No.	%		Positive No.	%	Negative No.	%	
Male	750	-	-	750	100	-	-	-	-	750	
Female	-	-	-	-	-	41	3.18	494	96.82	535	
Total	750	-	-	-	-	535				1285	

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Table (3)
Incidence of Brucellosis among Buffaloes

Sex	Total	Less than 3 years				More than 5 years				Total	
		Positive		Negative		Positive		Negative			
		No.	%	No.	%	No.	%	No.	%		
Male	593	-	-	593	100	-	-	-	-	593	
Female	-	-	-	-	-	837	7	0.48	830	99.52	837
Total	593					837				1430	

Table (4)
Incidence of Brucellosis among camels

Sex	Total	Less than 3 years				Total	More than 5 years				Total
		Positive		Negative			Positive		Negative		
		No.	%	No.	%		No.	%	No.	%	
Male	19	1	5.26	18	94.74	-	-	-	-	19	
Female	-	-	-	-	-	32	3	9.37	29	90.63	32
Total	19										

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