



INCIDENCE OF TRICHOMONAS FOETUS INFECTION IN BULLS IN SHARKYA GOVERNORATE. EGYPT
(WITH 2 TABLES)

By

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SUMMARY

1240 bulls were examined for the detection of *Trichomonas foetus* in 11 districts of Sharkya Governorate during the summer time of the years 1965 till 1978.

Out of 659 buffalo bulls, 569 Friezian bulls and 12 non-governmental native breed bulls; it is found that all native breed bulls examined were negative, while three Buffalo bulls and 26 Friezian bulls were positive. The highest percentage of infection was 22.2% at the year 1967 among the Friezian bulls. All breeds of bulls are considered negative till end of this work.

Regarding the rate of infection in the 11 districts, Menia El Gamh and Belbes were found to present the highest number of infected bulls. On the other hand Fakoose was free of infection all over the years.

INTRODUCTION

One of the most important venereal parasites is *Trichomonas foetus*, where the parasite was first isolated by RIEDMULLER (1928), WEINRICH and EMMERSON (1933). In Egypt it was isolated by FARAG, *et al.* (1965) for the first time.

In Egypt, *Trichomonas foetus* attracted our attention since 1964, after introduction of Friezian and Simmental cattle. It has economic effects on fertility and delayed breeding according to KERR and LAMONT (1938) & BARTLETT (1947). The infection usually occurs venereally from bulls to cows or vice versa during serving. Transmission between cows may take place indirectly via grooming tools or by infected vaginal discharge from one animal to another.

Artificial insemination helps also in spreading the infection, when semen from infected bulls is used. In cows, the parasite causes early abortion, pyometra and infertility. While among bulls, there is no obvious symptoms, but occasionally slight swelling of the prepuce in early infection with no alteration of the semen picture.

The purpose of the present investigation is to investigate the evidence of this infection in 11 districts of Sharkya Governorate during 14 years period extending from 1965 till 1978 among Buffalo, Friezian and native breed bulls.

MATERIAL AND METHOD

1240 Bulls were yearly examined for the detection of *Trichomonas foetus* during summer seasons since 1965 till 1978. The animals were in 11 main districts of the Sharkya Governorate, among both governmental and non governmental bulls. They included 659 buffalo bulls, 569 friezian bulls and 12 native breed bulls.

The material used for examination of *Trichomonas foetus* was the preputal washing. The prepuce was washed thoroughly with water and soap at first after cutting the hair to about half an inch to avoid irritation of penile mucosa by hair stum. Disinfection of the preputal orifice with a piece of cotton soaked in 70% alcohol followed by washing with Reed and Orr media without addition of agar. This media is composed of:

Proteose peptone No 3 Difco (B122)	20 gm.
Sodium chloride	5 gm.
Sodium thicglycollate (Difco)	1 gm.
Dist. water	1000 gm.

The pH of this media was adjusted to 7.3 and distributed in 50 ml sterilized bottles where each was used for a washing samples. Tools used for collection of the preputal washings were 100 ml. screw capped glass bottles, 50 ml. rubber bulb, bent glass catheter 40 cm. long with an inner diameter of 8 mm. and pyrex glass tubrugs. The samples arrived to the laboratory before the elapse of four hours from time of collection. The material was centrifuged for 5 minutes at a rate of 3000 r.p.m., and the sediment was examined by the direct smear method for

Trichomonas parasite. A phase contrast microscope was used where the parasite could be seen active under low magnification (400 X). Several trials of staining were found difficult due to shrinkage and destruction of the parasite during the process of fixation.

Negative sediments were cultured on Tryptose broth media which is composed of:

Tryptose Difco powder	20 gm.
Sodium chloride	5 gm.
Glucose	25 gm.
Dist. water	1000 gm.

The media is added to bovine serum slopes. Just before use, a 1000 I.U. crystalline penicillin G and Dihydro-streptomycin sulphate per 1 ml. of the media were added. Final pH was adjusted to 7.2 - 7.4 by adding a drop of 10% sodium hydroxide solution. The culture was then incubated at 37°C till 10 days and examined every other day for *Trichomonas foetus*.

RESULTS

All native breed bulls examined were found negative while three Buffalo and 26 Friesian bulls (Table 1) with a percentage of 0.46 and 4.57% respectively. The highest percentage of infection was 22.2% among the Friesian bulls in year 1967 and 7.1% among Buffalo bulls in year 1972. At the beginning of the year 1974, all bulls of different breeds were found negative.

Regarding the rate of infection with *Trichomonas foetus* among the bulls in the 11 districts of the governorate during the 14 years, Menia El Gamh and Belbes was found to present the highest degree of infection. On the other hand, Fakoose was negative all over that time (Table 2).

TABLE (1)

Percentage of infection in Buffalo and Friesian bulls.

Years	Buffalo bulls			Friesian bulls		
	No. examined	+ve	% Infect.	No. examined	+ve	% Infect.
1965	33	-	-	24	1	4.2
1966	57	1	1.8	58	2	3.4
1967	54	-	-	45	10	22.2
1968	63	-	-	36	4	11.1
1969	79	-	-	42	1	2.4
1970	69	-	-	75	6	8
1971	59	-	-	37	1	2.7
1972	14	1	7.1	12	1	8.3
1973	30	1	3.3	-	-	-
1974	55	-	-	48	-	-
1975	22	-	-	28	-	-
1976	38	-	-	68	-	-
1977	42	-	-	63	-	-
1978	34	-	-	33	-	-
Total	659	3	0.46	569	26	4.57

NB: 4 non governmental native breed bulls examined at 1965 were negative.

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TRICHOMONAS FOETUS IN BULLS

TABLE (2)

Positive bulls in different districts of Sharkya Governorate and years

Districts	No. of +ve bulls during years 1965-1978.										Total No.
	65	66	67	68	69	70	71	72	73	74-78	
Zagazig	-	-	1	-	-	-	1	-	-	-	2
Hehia	-	-	1	-	-	1	-	1	-	-	3
Menia El Gamh	-	-	2	2	-	2	-	-	1	-	7
Abo Hammad	-	-	1	-	-	-	-	-	-	-	1
Belbes	-	-	1	1	1	2	-	-	-	-	5
Diarb Nigm	-	-	3	1	-	-	-	-	-	-	4
Abo Kebeer	-	2	1	-	-	-	-	-	-	-	3
Kafr Sagr	1	1	-	-	-	-	-	-	-	-	2
Fakose	-	-	-	-	-	-	-	-	-	-	-
El Heseinia	-	-	-	-	-	1	-	-	-	-	1
El Salhia	-	-	-	-	-	-	-	-	1	-	1

DISCUSSION

From the results obtained, it is clear that the native breed animals were found to harbour a very low rate of infection with *Trichomonas foetus* while the Friezian bulls, positives were 4.57%. The number of infected Baffaloe bulls was very small which may be related to the control program adopted for eradication of infection among Egyptian native breeds. The incidence of infection with *Trichomonas foetus* among Friezian bulls had increased to attain its highest level on the year 1967 and decreased gradually to zero level 1974 and after-wards. This may be attributed to the program of control and excluding infected bulls from mating female ones and application of medicaments. Probably if we have used serological tests, other percentages could be attained. However, PIERCE, (1947) and FLORENT, (1948) had mentioned that such tests were unreliable in bulls infected with *Trichomonas foetus*.

The authors suggest for the control of trichomoniasis among bulls on the complete eradication, by slaughtering infected bulls, also the application of artificial insemination using semen obtained from trichomonas free bulls for 2 years would protect clean bulls from capturing infection afterwards. The treatment of all cases of pyometra in cows should be carried in another isolated stables that kept under good hygienic conditions.

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