

University of Elneelain. Sudan,
Khartoum, Sudan.

THE INFLUENCE OF TRYPANOSOMOSIS INFECTION AND TREATMENT WITH CYMELARSAN ON THE PROGESTERONE PROFILE IN FEMALE CAMELS "CAMELUS DROMEDARIES"

(With 1 Table)

By

O.F. IDRIS, O.A ABDELSALAM, N.M. ELBAGIR** and H.I. SERI****

*: Department of Biochemistry, Faculty of Veterinary Science, University of Bahr Elghazal. Khartoum, Sudan.

** : Department of Biochemistry, Faculty of Veterinary Medicine, University of Khartoum. Sudan

***: Department of Clinical Studies, Faculty of Veterinary Science, University of Nyala.

SUMMARY

This study was conducted to investigate the influence of trypanosomosis infection, and treatment with Cymelarsan, (the new arsenical compound) and the serum progesterone profile in the female camel infected or non-infected by *T. evansi*. Blood samples were collected for 35 days at 5 days intervals from 16 female camels. Eight of them were already naturally infected with *T. evansi* strain and they were divided into 2 infected groups, while the other animals were clinically healthy and they were also divided into 2 non-infected groups. Cymelarsan was administered intramuscularly at 0.25-mg/kg body weight for one of the infected and non-infected groups. Progesterone level was measured before and after treatments using radioimmunoassay (RIA). The two treated groups showed an unobservable increase in progesterone level while the infected non-infected treated groups showed an observable significant decrease.

INTRODUCTION

In Sudan the camel "*Camelus dromedarius*" plays a very important role in the national income, and constitutes a major commodity in the livestock foreign trade (Schwartz, 1992). Trypanosomosis is far the most important protozoan of camels (Wilson, 1984). Abortion, premature births and an inability to feed the young all greatly reduce reproductive potential in affected herds (Yagil, 1982). In camels, progesterone concentration in the blood increases greatly only after coitus (Yagil, 1982), as there is no spontaneous ovulation. Abdel Rahim and ElNazier (1987) reported that the progesterone level was more than 5 ng/ml in pregnant status whereas in the non-pregnant animals concentration fell below 1 ng/ml. Cymelarsan injection (0.5%) Rhone-Merieux Lyon-France, is an arsenical drug used for treatment of trypanosomosis in Africa, especially that caused by *Trypanosoma evansi*, (Raynaud, et al 1989). Buion (1990)

declared that cymelarsan can be used in animals in poor condition or in pregnant females with no adverse systemic effects to investigate the changes that could occur, if any, in progesterone level in female camels, healthy and infected with *T. evansi* following the administration of Cymelarsan. The goal of this work was directed to investigate this relationship in female camels.

MATERIALS AND METHODS

16 female camels (*Camelus dromedarius*) were used in this study. They were aged 8-12 years old and weighed 400±20 kg. They were divided into 4 main groups:

- 1- Resembles the control group contained 4, uninfected, untreated animals.
- 2- 4 uninfected treated animals.
- 3- 4 infected untreated animals.
- 4- 4 infected treated animals.

