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**EFFECT OF CYMELARSAN AND T.EVANSI INFECTION ON
THYROID HORMONES (T₄ AND T₃)
PROFILE IN FEMALE CAMELS (CAMELUS DROMEDARIUS)
(With 2 Tables)**

By

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SUMMARY

A detailed study of the effect of the new arsenical compound Cymelarsan on thyroid hormones viz: T₃ and T₄ level was investigated in different groups (infected and non-infected) with Trypanosoma evansi she camels. Blood samples were collected from 16 female camels at different time intervals at zero time (befor injection), and then after 6, 12, 24hrs., and every 5 days until days 35. The sixteen camels, eight of them were naturally infected with T. evansi and they were divided into 2 infected groups, while the other animals were clinically healthy and they were divided into 2 non- infected groups. Cymelarsan was administred intramuscularly at 0.25-mg/kg body weight for one the infected and non-infected group. Thyroid hormones (T₃ and T₄) level was measured before and after treatments using radioimmunoassay (RIA) technique. Results indicated that T. Evansi caused a significant decline in serum T₄ and T₃ concentration in the infected untreated group, where as very slight increase observed in the infected treated group.

INTRODUCTION

In Sudan the one-humped camel (Camelus dromedaries) plays a very important role in the national income. Camels in Sudan have always been known to suffer from Trypanosomosis due to T. evansi, which has been recorded as the most important of the camel diseases (Oliver, 1907). Wasfi *et al.* (1987) reported that the normal level of thyroxin (T₄) and tri-iodothyronine (T₃) in male camels were 17.92-+1.19ng/dl and ng/dl and 9.33-+1.15ng/dl respectively. The thyroid gland is one of the endocrine organs, which is found to be affected during Trypanosomosis. To date, few studies link the histopathological changes seen in thyroid glands of trypanosome-infected animals with plasma thyroid hormone concentrations (Abebe and Eley, 1992). Cymelarsan injection (0.5%) manufactured by rhone-Merieux, Lyon-France, it is an arsenical drug that was successfully used on the treatment of Trypanosomosis in Africa, especially that caused by T. evansi (Raynaud *et al.*, 1989). This study was conducted investigate the changes that could occur in thyroid hormones (T₄ and T₃) level in female camels, healthy and infected with T. evansi following the administration of Cymelarsan.

MATERIAL and METHODS

16 female camels (Camelus dromedarus) were used in this study. They were aged 8-12 years old and weighed 400 ± 20 Kg. All animals were clinically healthy from any disease except 8 of them were infected with trypanosomes. They were divided into 4 main groups as follows:

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

- 1- Control group, which contained 4, non-infected, untreated animals.
- 2- 4 non-infected treated animals.
- 3- 4 infected untreated animals.
- 4- 4 infected treated animals.

All camels in the group No.(4) were recovered to their normal condition after treatment with Cymelarsan, and T. evansi was not detected in their blood after 24 hrs. from injection and no parasites were seen. The recommended dose of Cymelarsan (0.25 mg/kg B.W.) was used by intramuscular injection (I/M) in the third part of neck. Blood samples were collected from the jugular veins at zero time (at injection) then after 6hrs., 12hrs., 24hrs. and then every 5 days 35 (after injection of the drug) for thyroid hormones

