

Short Communication :

Some haematological changes in Camels "*Camelus dromedarius*" following subcutaneous injection of Ivomec.

By

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Summary

Four female camels "*Camelus dromedarius*" injected with Ivermectin subcutaneously in two different doses of 150 μ g and 200 μ g/kg body weight to study its effect on the blood constituents.

Results indicated that Ivermectin caused significant decrease in blood haemoglobin (Hb), mean corpuscular haemoglobin (MCH) and mean corpuscular haemoglobin concentration (MCHC). There is also significant decrease in the packed cell volume (PCV) and red blood cells counts (RBC). Mean cell volume (MCV) and white blood cells counts (WBC) were almost normal.

Introduction

Camels served as one of the most useful domestic animals that reveal and clarify the social and economical status of the Sudanese nation, hence they are used for food, transport and sport. In the Sudan, the one-humped camel "*Camelus dromedarius*" plays a very important role in the national income and as a source of meat, milk and hides, and constitutes a major commodity in the livestock foreign trade. The pharmacology and toxicity of the drugs likely to be used in the camel needs to be further studied to ensure the efficacy and safety of these drugs in these species (Ali, 1988). Ivermectin (22,23-dihydroavermectin B_{1a}) is a semisynthetic derivative widely used in veterinary medicine as

abroad -spectrum endectocide and in human to treat *Onchocerca volvulus* (Campbell and Benz, 1984). In this study the pharmacotoxic effect of Ivermectin in the camel was determined in blood samples, collected at spontaneous time points after two different doses of 150µg/kg and 200µg/kg body weight administered subcutaneously.

Materials and Methods

Experimental Animals: Four female healthy camels weighting 390-450 kg and aging 8-12 years were used. They were housed in one large pen at the Camel Research Centre , Faculty of Veterinary Science, Shambat, University of Khartoum. Before the stall of the experiment they were examined clinically for their freedom from external and internal parasites.

Treatments: Ivermectin (Ivomec, MSD AG VET) was injected subcutaneously in the neck region at two different doses of 150 µg and 200-µg/kg-body weight.

Experimental work: Three experiments were carried using the above mentioned animals. Samples were collected from the animals before injection of the drug as mentioned above as control group. Then the same animals were utilized as treatment1 (given a single injection of ivomec 150 µg/kg) subcutaneously in day one of the experiment; and treatment2 (200 µg/kg) subcutaneously once in day 35 of the experiment.

Blood Collection: Blood samples for whole blood were withdrawn from the jugular vein at 0 (before injection) and at 6 and 12 hours and then at 1,2,3,4,5,6,7,8,9,10,11, 12, 13, 14, 15, 20, 25, 30 & 35 days before and after the administration of the drug using a vacutainer system containing ethylene diamine tetra acetic acid (EDTA) as anti coagulant.

Haematological investigations: Erythrocyte (RBC) and lueukocyte (WBC) counts, haemoglobin concentration (Hb), packed cell volume (PCV), mean corpuscular volume (MCV), mean corpuscular haemoglobin (MCH) and mean corpuscular haemoglobin concentration (MCHC) were performed by standard methods (Jain, 1986; Kelly, 1984).

