Short Communication :

Some biochemical changes of ivermectin *"Ivomec"* intravenously administered to camels *"Camelus dromedarius "*

By

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Summary

Four healthy male camels *"Camelus dromedarius"* were injected with Ivermectin at single intravenous dose of 200µg/kg BW.

Results indicated increases in serum enzyme alkaline phosphatase activity and creatinine concentration. However; serum albumin, urea, urea nitrogen, calcium and phosphorus concentration were decreased. No significant changes on the blood glucose and total serum protein concentration was detected during the study period.

Introduction

Ivermectin (22,23-dihydroavermectin B_{1a}) is a semisynthetic derivative widely used in veterinary medicine as a broad-spectrum endectocide and in humans to treat *Onchocerca volvoulus* (Campbell and Benz, 1984; Campbell, 1989). In this country, most of the livestock owners are nomadic illiterates and frequently do not follow drug specific instructions and hence, adverse drug effect have occurred Mohamed and Hussein (1994). In the camel, Ivermectin has excellent efficacy for an important range of gastrointestinal nematodes (Ibrahim *et al.*, 1981), and mange mites (Opferman, 1985). In the Sudan, ivomec was found to be effective in the treatment of camels infected with sarcoptic mange and strongyle endoparasites (Daffalla *et al.*, 1987). This experiment was

conducted to evaluate some biochemical parameters in camel following therapeutic intravenous injection with.

Materials and Methods

Experimental animals: Four male healthy camels weighing 280-320 kg and aging 4- 7 years were used in this study .They were housed in one large pen at Radioisotopes Unit, Central Veterinary Research Laboratory. They were provided with sorghum and water *adlibitum.* Before the beginning of the experiment, they were examined clinically for their freedom from external and internal parasites.

Treatment: Ivermectin (ivomec; MSD AG VET) was injected intravenously in the jugular vein of each camel at dose equal to 200 µg/kg body weight once in day one of the experiment.

Blood collection: Blood was obtained by jugular vein puncture in plain and heparinized vacutainer tubes. Serum and plasma were separated by centrifugation and stored at - 20^0C for biochemical analysis. Blood samples were withdrawn from the jugular vein at 0, 0.25, 0.5, 1, 2, 3, 4, 6, 8, 10, 12, 24, 36 and 48 hours and then at 4, 6, 8, 10, 12, 14, 16 and 18 days before and after the drug administration. Samples were collected from the animals before injection are used as self control.

Biochemical methods: Total serum protein concentration was measured by Biuret method according to King and Wooton (1956). The serum albumin concentration was detennined by Bromocresol green method (BCG) according to Barthlonnew and Delany (1966). The activity of alkaline phosphatase was measured by an enzymatic colorimetric method using a commercial kit (plasmatec Laboratory products Ltd. U. K.). Serum urea, creatinine, calcuim and glucose concentration was measured using a commercial kit (Randox Laboratories Ltd., U. K.). Urea nitrogen was calculated in mg/dl as follows: 1 mg of urea corresponds to 0.467 mg of urea nitrogen. The serum inorganic phosphorus was determined according to Varley (1967).