Natural Resources Department

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Treatment of some diseases using camel milk in Egypt and Somalia

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Abstract

Aluminum toxicity:

The present study was carried out to evaluate the efficiency of camel's milk to ameliorate the toxicity of aluminum chloride $AlCl_3$ on some hematological parameters; hepatic, renal functions and lipids profile; as well as the histopathological alterations of some organs. Forty rats were divided into 5 treatment groups (8 rats in each group): Group1: Normal rats (negative control); Group2: $AlCl_3$ induced toxicity (positive control); Group3: $AlCl_3$ induced toxicity rats fed on raw camel milk; Group4: $AlCl_3$ induced toxicity rats fed on heat treated camel milk; and Group5: $AlCl_3$ induced toxicity rats fed on sweet acidophilus camel milk. Rats were treated by 5ml camel's milk 10 min before the administration of 1 ml $AlCl_3$; and had their respective doses daily for 30 successive days orally. $AlCl_3$ oral administration resulted in a significant decrease in red blood cells count (RBC's), significant increase in mean corpuscular volume (MCV) and mean corpuscular hemoglobin (MCH) in $AlCl_3$ group compared to the control group (normal rats); while hemoglobin (Hb), hematocrit (Hct), mean corpuscular hemoglobin concentration (MCHC), platelets (plt), reticulocytes (Retics) did not revealed significant changes between the two groups;

the obtained anemia was macrocytic normochromic. The lipids profile; hepatic and renal functions showed non-significant changes between different groups; however, histopathological examination showed variable alterations of varying severity in different organs; as a response to $AlCl_3$ and camel's milk administration. Camel's milk administration in groups 3, 4, 5 alleviated the toxic effect of $AlCl_3$ with variable degrees between different groups.

Hypercholesterolemia:

The present study was carried out to evaluate the protective effect of camel's milk when concomitantly administered orally with high fat diet by investigation of lipids profile, hepatic, and renal functions; as well as the histopathological alterations of liver organ. Thirty rats were divided into 5 treatment groups (6 rats in each group): Group1: basal diet normal rats (negative control); Group2: high fat diet untreated rats (positive control); Group3: high fat diet rats fed on raw camel milk; Group4: high fat diet rats fed on camel milk thermally treated; and Group5: high fat diet rats fed on sweet acidophilus camel milk. Rats were orally treated using a feeding bottle (40 ml camel's milk /rat); and had their respective doses daily for 30 successive days. High fat diet resulted in non-significant difference in values of total cholesterol, HDL, total protein, albumin, urea and creatinine; while triglycerides, AST and ALT revealed significant changes between different groups. However, histopathological examination showed variable alterations of varying severity in liver organ; besides the response to camel's milk treatment. Administration of camel's milk in groups 3, 4, 5 as a protective agent against hypercholesterolemia had variable degrees between different groups.

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