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Title:

Physiological and Histological Effect of Colostrum and Camel Milk in Diabetic Male Rats

Abstract:

The present study was conducted to investigate the effect of colostrums and camel milk on body weight , hematological parameters(Red blood corpuscle count, platelets count, Hemoglobin, Packed cell volume, total and differential White blood cell count), concentration of serum glucose ,levels of insulin and testosterone) liver enzymes(Alanine aminotransferase, Aspartate aminotransferase, Alkaline phosphatase), kidney functions test(uric acid, urea, creatinin),total protein ,albumin ,lipid profile ((cholesterol, triglycerides (TG), high density lipoproteins (HDL),low density lipoproteins)), oxidant marker (MDA),some reproductive parameter(sperm count ,sperm deformity), histological examination (pancreas, liver and kidney) of normal and diabetic male rats.

The study is divided into three experiments according to the period of treatment , the first experiment undertaken to investigate the effect of colostrums through7 days of treatment, the experiment carried out on (24) male rats divided randomly and equally to 4 groups, the first group was administrated orally with (2ml/day) of distal water, the second group was injected by (0.5ml/animal) with alloxan (150mg/kg), while the third injected by (0.5ml/animal) with alloxan (150mg/kg) and treated with insulin(6 unit /kg/day) IP injection , and the fourth groups were injected by (0.5ml/animal) with alloxan (150mg/kg) and administrated orally with colostrum (2ml/d ay).The second experiment is undertaken to investigate the effect of virgin and multipara camel milk through30 days of treatment, the experiment carried out on (42) male rats divided randomly and equally to 7 groups .

The first group was ad ministrated orally with (2ml/day) of distal water, the second group was injected by (0.5ml/animal) with alloxan (150mg/kg), the third injected by (0.5ml/animal) with alloxan (150mg/kg) and treated with insulin(6 unit /kg/day) IP injection ,the fourth groups were injected by (0.5ml/animal) with alloxan (150mg/kg) and administrated orally with virgin camel milk (2ml/day) ,the fifth group were injected by (0.5ml/animal) with alloxan (150mg/kg) and administrated orally with multipara camel milk ,the sixth group administrated orally with virgin camel milk (2ml/day) and the seventh group administrated orally with multipara camel milk (2ml/day).The experimental period was continuous for 30 consecutive days. Third experiment undertaken to investigate the effect of virgin and multipara camel milk through60 days of treatment, the experiment carried out on (54) male rats divided randomly and equally to

9groups .

The first group was administrated orally with (2ml/day) of distal water, the second group was injected by (0.5ml/animal) with alloxan (150mg/kg),while the third injected by (0.5ml/animal) with alloxan (150mg/kg) and treated with insulin(6 unit /kg/day) IP injection ,the fourth groups was injected by (0.5ml/animal) with alloxan (150mg/kg) and administrated orally with virgin came l milk (2ml/day) .the fifth group was injected by (0.5ml/animal) with alloxan (150mg/kg) and administrated orally with multipara camel milk ,while sixth group administrated orally with virgin camel milk (2ml/day) and the seventh group administrated orally with multipara camel milk (2ml/day).the eighth group was injected by (0.5ml/animal) with alloxan (150mg/kg) and administrated orally with virgin camel milk (2ml/day) then leaving out 30 days, and ninth group was injected by (0.5ml/animal) with alloxan (150mg/kg) and administrated orally with multipara camel milk (2ml/day) then leaving out 30 days .The experimental period was continuous for 90 days. At the end of the experimental periods, sixth animals from each group were sacrificed, the blood samples was collected for hematological and biochemical parameters, organs were taken for histological examination.