



Ain Shams University
Faculty Of Education (Abasia Branch)
Home Economics Dept.

Effectiveness Of Some Natural Antioxidants In Restricting The Renal Dysfunction In Rats

Thesis

Submitted To Home Economics Dept. Faculty Of Education.
In Partial Fulfillment Of The Requirements For The Ph. D. Degree
In Specific Education. Home Economics. (Nutrition and Food Sciences)

By

Soha Mohamed Yusef Hasan

Assist. Lecturer in Home Economics Dept.
(Nutrition & Food Sciences)
Faculty Of Specific Education. Fayoum University

Under Supervision OF

Prof. Dr. Zakaria El Baz Rihan

Prof. Of Medicine
Military Medical Academy

Prof. Dr. Eveleen Said Abd Alla

Prof. Of Nutrition. Home Economics Dept.
Faculty Of Education
EX-Vice Dean For Environment And Post Graduate
Studies & Researches. Faculty Of Specific Education
Ain Shams University

Prof. Dr. Elsayed Abd Elkhaliq Hassanin

Prof. Of Biochemistry
Chief Dept. Of Nutrition Chemistry & Metabolism
National Nutrition Institute
Ministry Of Health

Assist. Prof. Dr. Ayman Fathey Khalil

Assist. Prof. Of Nutrition & Food Sciences.
Home Economics Dept. Faculty Of Education
Ain Shams University

ABSTRACT

Effectiveness Of Some Natural Antioxidants In Restricting The Renal Dysfunction In Rats.

The present study is carrying out for investigating the effect of supplementation with some natural antioxidant extracts in restricting the renal dysfunction in rats. (56) adult male Sprague-Dawley rats (150-200g) divided to two groups. First group: (8) rats were fed on standard diet (S.D.), as a negative control group. Second group: (48) rats were injected intraperitoneal with a single dose of Cis-diammine dichloride platinum II (CDDP) for inducing renal dysfunction (2.5mg/kg) then it was divided to six subgroups each (8). (1): fed on (S.D.) as a positive control group. (2): fed on (S.D.) + vitamin A (15mg/kg/day). (3): fed on (S.D.) + vitamin E (317 I.U./kg/day). (4): fed on (S.D.) + vitamin C (280 mg/kg/day). (5): fed on (S.D.) + Selenium (0.6mg/kg/day). (6) fed on (S.D.) + Green Tea Extract (100 mg/kg/day). The experimental period was four weeks, results were statistically analyzed. The Results proved that group of nephrotoxicity rats supplemented with vitamin C showed significant reduction in serum urea nitrogen (57.00%), creatinine (63.04%), uric acid (34.68%), nitric oxide (47.5%), sodium (27.26%) and significant elevation in serum potassium (26.53%), albumin (84.28%) compared with positive control group. Best results in histopathological examination of kidney were in Selenium group. These results suggest that natural antioxidants could be beneficial as additional therapy in renal dysfunction.

Key Words: Renal Functions, Renal Dysfunction, Nephrotoxicity, Natural Antioxidants and histopathological examination.