Original Paper

Effect of hydroalcoholic extracts of *Amaranthus caudatus l* on inflammation markers level in hypercholesterolemic Rabbits

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Abstract

Background and Objective: Elevated levels of inflammation markers including white blood cell, platelet, serum fibrinogen and CRP are associated with prognosis in patients with coronary artery diseases. This study was done to determine the effect of hydroalcoholic extracts of *Amaranthus caudatus l* on Inflammation markers level in Hypercholesterolemic Rabbits.

Materials and Methods: In this experimental study, 20 male Rabbits were allocated into four groups of five each: Group I Normal diet(75 days); Group II Hypercholesterolemic diet (75 days); Group III and IV Hypercholesterolemic diet (45 days) followed by Normal diet and Normal diet with hydroalcoholic extracts *Amaranthus caudatus l.*, respectively for an additional 30 days(Regression period). Blood samples were collected from rabbits before and after 45 days and 75 days of respective diet regimen. The level of White Blood cell, platelet, serum fibrinogen and CRP were measured. Data analyzed by using SPSS-13 and one-way ANOVA test.

Results: CRP in treatment group reduced from 8.14±4.5 mg/l to 17.8±4.6 mg/l in hypercholesterolemic animals (group II) ($P<0.05$). WBC count was 20820±8692 and 42366±17048 in treatment and hypercholesterolemic animals, respectively ($P<0.05$). Platelet and fibrinogen concentration was reduced in treatment group 502600±35725 and 208±24 mg/dl, respectively in comparison with hypercholesterolemic animals 638000±59774 and 299±46 mg/dl, respectively. These differences were significant ($P<0.05$).

Conclusion: This study showed that hydroalcoholic extracts of *Amaranthus caudatus l* reduces inflammatory markers in hypercholesterolemic rabbits.

Keywords: Hypercholesterolemia, Inflammation, *Amaranthus caudatus l.*, CRP, WBC, Fibrinogen, Platelet

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