



Research article

Protective effects of natural antioxidant supplementation on cadmium induced toxicity in albino mice

P. Vijaya*, Suman Sharma

Department of zoology & environmental sciences, punjabi university, patiala-147002, Punjab (India).

Keywords: Cadmium (Cd), garlic extract (GE), tomato extract (TE) and antioxidants.

***Corresponding Author: P. Vijaya,** Department of Zoology and Environmental Sciences, Punjabi University, Patiala-147002, Punjab, India.

Abstract

Objectives: Cadmium (Cd) is a widespread industrial and environmental pollutant that may cause harmful effects on humans and animals. It can cause dysfunction of different body organs. The present study has been undertaken to evaluate the protective efficacy of natural antioxidants (garlic + tomato) against cadmium induced toxicity in brain and kidney of albino mice. **Materials and methods:** Albino mice were divided into different groups: (1) control mice, (2) animals were administered Cd (6 mg/kg bw) orally, (3) animals were given a Cd followed by a daily dose of garlic (100 mg/kg bw) + tomato (50 mg/kg bw) extract orally, (4) mice were given a Cd singly and were kept for 15 days and then given garlic (100 mg/kg bw) + tomato (50 mg/kg bw) extract for next 15 days. **Results and conclusion:** Results showed a significant elevation in LPO levels with decreased activity of SOD, CAT and GST in Cd intoxicated groups at 15 and 45 days post treatment. With garlic + tomato supplementation, a significant reversal in the oxidative stress enzymes was observed and also restored the biochemical changes in brain and kidney tissue. It was concluded that garlic + tomato prevented the Cd induced damage and this might be due to strong antioxidant potential of their components.