
Abstract

INTRODUCTION:
The present study was designed to investigate whether cinnamon bark extract (CBEt) mitigates the adverse effects of fructose loading on glucose metabolism and lipid profile in rats.

METHODS:
Adult male albino rats of body weight 150-170 g were divided into five groups and fed with either control or high fructose diet (HFD). CBEt was administered to HFD-fed rats orally at two doses (a low and a high dose) while the control diet-fed rats were treated with a high dose of CBEt. The treatment protocol was carried out for 60 days after which the oral glucose tolerance test was carried out. Biochemical parameters related to glucose metabolism and lipid profile were assayed.

RESULTS:
The levels of glucose, insulin and protein-bound sugars were higher and activities of enzymes of glucose metabolism were altered in HFD-fed rats, as compared to control animals. The levels were brought back to near-normal when administered with CBEt at high dose. CBEt also prevented the hyperlipidaemia observed in fructose-fed rats and improved glucose tolerance. CBEt did not show any significant effect in fructose-fed rats when administered at low dose.

CONCLUSION:
These findings indicate the improvement of glucose metabolism in-vivo by CBEt in fructose-fed rats.