Hypolipidemic activity of an aqueous extract of Morinda citrifolia fruit in normal and streptozotocin-induced diabetic rats

ABSTRACT

This study was undertaken to investigate the hypolipidemic activity of Morinda citrifolia fruit extract. Aqueous extract of M. citrifolia in concentrations ranging from 0.25 g/kg (low dose), 0.50 g/kg (medium dose) and 1.00 g/kg (high dose) were orally administered on streptozotocin-induced diabetic rats for 6 weeks. The hypolipidemic effect of M. citrifolia extract in rats was determined by measuring the total lipid, total cholesterol and triglyceride concentrations in blood (plasma) and liver tissue. The administration of medium dose of M. citrifolia extract had significantly (p <0.05) reduced the cholesterol content in blood and liver of normal rats as compared to the normal control rats. For the diabetic rats, the administration of medium and high doses of M. citrifolia extracts successfully reduced the plasma triglyceride level significantly (p <0.05) as compared to diabetic control rats. The concentration of triglyceride and total lipid in the liver were also decreased significantly (p <0.05) in the diabetic rats which had received high dose of M. citrifolia extract as compared to control rats. Results showed that M. citrifolia exhibits the potential in lowering the concentration of certain lipid components in blood and tissue of experimental rats.

Keyword: Morinda citrifolia; Hypolipidemic; Normal rats; Streptozotocin-induced diabetic rats