

Effect of ethanolic extract of *Cassia occidentalis* Linn. for the management of alloxan-induced diabetic rats

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ABSTRACT

Aim As per traditional claims, root, bark, leaf and flower of the plant *Cassia occidentalis* Linn. (Caesalpiniaceae) have been reported to possess antidiabetic activity. Based on this traditional indication, the aim of this study was to evaluate the antidiabetic activity of ethanolic extract of *C. occidentalis* in normal and alloxan induced diabetic rats. **Materials and Methods** Ethanolic extract of the whole plant of *C. occidentalis* was orally tested at doses of 100 and 200 mg/kg for evaluating the hypoglycemic effect in normal and alloxan-induced diabetic rats. In addition, changes in body weight, serum cholesterol, triglyceride and total protein levels, assessed in the ethanol extract treated diabetic rats were compared with diabetic control and normal animals. Histopathologic observations during 21 days of treatment were also evaluated. **Results** Ethanolic extract of *C. occidentalis* produced a significant reduction in fasting blood glucose levels in the normal and alloxan-induced diabetic rats at doses of 100 and 200 mg/kg body weight. Treatment with ethanolic extract of *C. occidentalis* in normal and alloxan-induced diabetic rats led to a dose-dependent fall in blood sugar levels. Significant differences were observed in serum lipid profiles (cholesterol and triglyceride), serum protein and changes in body weight in ethanolic extract treated diabetic animals, when compared with the diabetic control and normal animals. Concurrent histopathologic studies of the pancreas of these animals showed comparable regeneration by ethanolic extract, which were earlier necrosed by alloxan. **Conclusion** Ethanolic extract of *C. occidentalis* exhibited significant antidiabetic activity in normal and alloxan-induced diabetic rats. The rats also showed improvement in parameters like body weight and lipid profiles and also, histopathologic studies showed regeneration of beta-cells of pancreas and so it might be of value in the treatment of diabetes.

KEYWORDS

Antidiabetic activity . *Cassia occidentalis* . histopathology . alloxan

REFERENCES