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Original Article

Hypolipidemic effects of alcoholic extract of eucalyptus (*Eucalyptus globulus* Labill.) leaves on diabetic and non-diabetic rats

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Abstract:

Background: In traditional medicine, leaves of eucalyptus (*Eucalyptus globulus* Labill.) possess interesting biological properties such as antioxidant, antibacterial and antiviral effects. The aim of this study was to evaluate the hypolipidemic effects of eucalyptus ethanolic extract in non-diabetic and streptozotocin-induced diabetic rats.

Methods: In the present study, oral administration of 0.05, 0.1, 0.2 and 0.4 g/kg of eucalyptus leaves alcoholic extract for 21 days on the level of triglyceride and cholesterol in non-diabetic and streptozotocin-induced diabetic rats were evaluated. Six rats were arranged in each experimental group. A comparison was made between the effects of the alcoholic extract and a known antidiabetic agent, glibenclamide (600 mg/kg). Statistical analysis was carried out using one-way ANOVA followed by Tukey's post hoc test.

Results: The results showed that oral administration of the eucalyptus alcoholic extract caused a significant reduction of serum triglyceride and cholesterol in diabetic rats ($P < 0.05$); whereas did not significantly change the levels of serum triglyceride and cholesterol in non-diabetic rats ($P < 0.05$). The hypolipidemic effects of the extract were similar to that observed for glibenclamide.

Conclusion: It can be suggested to using leaves of eucalyptus as an adjuvant in the treatment of diabetes, however, further biochemical and pharmacological investigations are warranted to precisely elucidate the possible mechanism of action of this plant.

Keywords:

[Eucalyptus \(*Eucalyptus globulus* Labill\)](#) . [Lipids](#) . [diabetes](#)

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