

Effects of *Strobilanthes crispus* tea aqueous extracts on glucose and lipid profile in normal and streptozotocin-induced hyperglycemic rats.

ABSTRACT

Strobilanthes crispus (Acanthaceae) has been used traditionally as antidiabetic, diuretic, antilytic, and laxative and has been proven scientifically to possess high antioxidant activity, anti-AIDS, and anticancer properties. It is commonly consumed in the form of herbal tea. The ethnopharmacological value of this plant, such as the development of nutraceutical *S. crispus* herbal tea (fermented and unfermented) and assessment of their antihyperglycemic properties were investigated. The antidiabetic properties of *S. crispus* fermented and unfermented tea was carried out in normal and streptozotocin-induced hyperglycaemic rats for 21 days. Glucose and lipid profile (total cholesterol, triglyceride, HDL-cholesterol, LDL-cholesterol) were determined at day 0 (baseline), day 7, and day 21. The results showed that the hot water extract of both fermented and unfermented *S. crispus* tea reduced blood glucose in hyperglycaemic rats. *S. crispus* unfermented tea also reduced glucose level in normal rat. Both fermented and unfermented *S. crispus* tea also showed to improve lipid profile. Antioxidant and polyphenol content that present in the extracts might contribute to the antihyperglycemic and antilipidemic properties. Further study is needed to be carried out in pre-clinical and clinical environment to prove its efficacy in human.

Keyword: Antihyperglycemic; Glucose; Lipid profile; *Strobilanthes crispus* tea.