ABSTRACT

Background:

Diabetes is a metabolic disorder which is rising globally in developing countries. Many herbal medicine have been recommended for diabetes mellitus considering that they are highly efficacious and less toxic than standard oral hypoglycaemic agents. *Tephrosia purpurea* is used as traditional medicines for the treatment of various ailments, especially in the case of diabetes mellitus.

Aims and Objectives:

The aim of the study is to evaluate the anti-diabetic activity of whole plant extract of *Tephrosia purpurea* on Streptozotocin – Nicotinamide induced diabetes in Wistar Albino rats.

Materials and Methods:

A total of 30 animals were divided into five groups of 6 animals each. Diabetes is induced by STZ-Nicotinamide. Group I received 0.1 % CMC as vehicle, Group II is diabetic untreated rats, Group III is treated with Glibenclamide (5mg/kg) and Group IV & V are orally treated with ethanolic extract of *Tephrosia purpurea* 200mg/kg & 400mg/kg respectively for 30 days. Blood glucose levels were measured at different time intervals during the study. At the end of the study blood was collected for determination of Lipid profiles, Liver and Renal function test.
Results:

In STZ-Nicotinamide induced diabetic rats, treated with 200 and 400 mg/kg of *Tephrosia purpurea* blood glucose level reduced significantly (P<0.05) and (P<0.01) on 5th day respectively as compared to untreated rats. On 15th day and 30th day, administration of 200 and 400 mg/kg of *Tephrosia purpurea* significantly (P<0.001) lowered the blood glucose as compared to untreated rats. The lipid profiles, Liver and Renal profile were significantly normal as compared to normal rats.

Conclusion:

It can be concluded that, *Tephrosia purpurea* exhibited antidiabetic activity in dose dependent manner against STZ – nicotinamide induced diabetes in Wistar albino rats thereby authenticating its ethnomedicinal practice and may supports the use in management of diabetes mellitus.

Key Words: *Tephrosia purpurea*, Antidiabetic, Streptozotocin – Nicotinamide, Blood glucose levels.