Paspalum scorbiculatum (Kodo Millet): A Potential Natural Drug for Diabetes

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Diabetes, a prominent metabolic disorder characterized by hyperglycaemia, associated with impairment in insulin secretion as well as alteration in intermediary metabolism of carbohydrates, proteins and lipids. Several reports indicate a likely worldwide increase in incidence rate of Diabetes Mellitus, especially in India. It has been proposed that approximately 57 million Indians will be affected and 360 million worldwide by 2025. We therefore proposed to prepare an affordable natural remedy for diabetes with no side effects. We carried out ethno pharmacological studies using Paspalum scorbiculatum as an anti-diabetic agent. Aqueous extracts of grains and leaves of P. scorbiculatum were prepared and phytochemical analysis was conducted. Total phenolic content of extracts were done at different stages of plant growth and specific phenols were identified and recorded using High performance Liquid Chromatography. Under the supervision and guidance of scientists from the Pharmacology Department, experiments were carried out for 15 days on the control of blood sugar levels by administering the extracts as per scientific protocol. Fasting blood glucose was recorded on days 0, 15, 10 and 15 with a one touch glucometer. Oral glucose tolerance tests were conducted on day 15. Fasting total triglyceride and cholesterol were also estimated on day 15. Our data suggests that extracts of grains and leaves of P. scorbiculatum possess potential anti diabetic activity as it lowers serum glucose levels. Hence, these extracts may be regarded as a promising natural and safe remedy for prevention of diabetic complications.