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Ethanollic extract of red cabbage (*Brassica oleracea*) ameliorates hyperglycemia and hyperlipidemia in Streptozotocin-diabetic rats

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Diabetes mellitus has become the most common metabolic disease worldwide. The edible leaves of Red cabbage (*Brassica oleracea*) are taken raw in salad or in the cooked form. Therefore, it was of interest to evaluate the hypoglycemic and hypolipidemic effects of ethanolic (50%) extract of the leaves of red cabbage to blood glucose, glycated hemoglobin (HbA1c) and lipid profile in streptozotocin (STZ)-induced diabetic rats. Diabetes was induced in male Wistar rats by injecting rats with a single dose (60 mg/kg body weight) of streptozotocin. Diabetic rats showed significant elevation in serum glucose, glycated hemoglobin (HbA1c) total cholesterol (TC), and triacylglycerol (TG). Daily oral supplementation (250 mg/kg body weight) of leaves of red cabbage extract for 40 days to STZ-induced diabetic rats significantly ameliorated serum glucose ($p < 001$), HbA1c ($p < 001$), TC ($p < 01$), and TG ($p < 01$). By comparison, a standard anti-hyperglycemic drug, glibenclamide when administered at a dose of 10 mg/kg body weight, reduced blood glucose, HbA1c, TC and TGs levels. It is concluded that ethanolic extract of red cabbage reduced the blood level of glucose, HbA1c and lipids and it was more effective than glibenclamide in reducing blood glucose.

Biography

Ali Al Saeed is a senior medical student at King Faisal University in Saudi Arabia. Ali is enthusiastic and passionate about science and research. He got remarkable achievements locally including the prize of first place in the research day of college of medicine King Faisal University. Ali has ongoing research project in different topics. Ali particularly is passionate about diabetes and metabolic disorders as they are prevalent in the kingdom of Saudi Arabia. His interest in diabetes and obesity led him initiate "Anti childhood obesity community" in the eastern province of Saudi Arabia, which is a cooperative project between King Faisal University and the United states in Riyadh. Ali is member of many of nonprofit organization in KSA including Alber charity center, Hayat association and hereditary blood diseases and blood donations associations in Al-Hassa.