ABSTRACT

The aim of this work was to study the potential protective effect of Sitagliptin, Tadalafil and Telmisartan on cardiovascular dysfunction in streptozotocin-induced diabetes in rats.

Diabetes mellitus was induced in male albino rats by intraperitoneal injection of streptozotocin STZ (60 mg/kg). Rats were divided into three groups; control group, diabetic group and drug treated diabetic group.

Sitagliptin (100 mg/kg), Tadalafil (4 mg/kg) and Telmisartan (5 mg/kg) were administered orally daily for 8 weeks to study their effects on blood glucose level, blood pressure, heart rate, echocardiographic data and histopathological analysis of cardiac tissue.

Results revealed that Serum level of glucose was decreased significantly with Sitagliptin and Telmisartan but not with Tadalafil. The three selected drugs significantly reduced the diabetes induced elevation in systolic blood pressure.

Echocardiographic data showed significant increase in ejection fraction (EF) and fractional shortening (FS) in the three drug- treated groups as compared to diabetic group. There was significant increase in both EF% and FS% in both Sitagliptin and Tadalafil treated diabetic groups compared to Telmisartan treated diabetic group.