

# Summary

The present study aimed at investigating and comparing the effects of telmisartan and valsartan on systolic blood pressure (SBP), diastolic blood pressure (DBP), serum leptin level, fasting serum glucose (FSG), fasting serum insulin, homeostasis model assessment of insulin resistance (HOMA-IR), BMI, waist circumference, serum uric acid level in type 2 diabetes mellitus (T2DM) patients with new diagnosis of hypertension, to achieve the aims of the present study, a randomized controlled comparative trial with open label design was adopted from 1<sup>st</sup> of February, 2012 to 30<sup>th</sup> of march, 2013.

The study's patients were confined to already diabetic type 2, but with new diagnosis of hypertension. Patients continued the follow up period were 88 subjects; 46 on telmisartan (80mg/day) and 42 enrolled with valsartan (80mg/day). Fourty one diabetic normotensive patients, age, sex, body mass index (BMI), duration of diabetic disease, duration of diabetic treatment matched to the diabetic hypertensive patients groups were kept as control group. All of these patients were on oral hypoglycemic agent, the percentage of patients receiving each of oral hypoglycemic agents did not differ between groups, the oral hypoglycemic agents remained unchanged during the two- month follow up study period.

All studied groups were subjected to measurement of SBP, DBP, serum leptin level, FSG, serum fasting insulin, HOMA-IR, BMI, waist circumference, serum uric acid level, these parameter were measured again at the end of 2 month of treatment for diabetic hypertensive groups.

Both telmisartan and valsartan significantly reduced serum leptin and BP. More reduction in DBP seen with valsartan than with telmisartan.

Telmisartan showed significant reduction BMI, WC, fasting serum insulin, and HOMA-IR but showed insignificant reduction in FSG. Valsartan showed significant improvement in FSG but insignificant improvement of BMI, WC, fasting serum insulin level and HOMA-IR.

The study showed no significant difference in the serum uric acid level of the diabetic hypertensive patients as compared with diabetic normotensive patients. Both drugs showed no significant changes in the serum uric acid level.

To sum up, the present study showed favorable effects of telmisartan and valsartan on blood pressure, serum leptin, glycemic control, in diabetic hypertensive patients and could be recommended for treatment of hypertension in obese diabetic patients.