Short Communication

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Epigeneics 2018: A Study to Compare Efficacy of Metformin-Glimepiride Versus Metformin-Tenelig Liptinin Type II Diabetic Patients- Md Gayoor Khan, Truba Institute of Pharmacy, India

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Introduction: Diabetes mellitus relates a metabolic disorder of collective aetiology which is characterized by chronic hyperglycaemia caused due to disturbances of carbohydrate, lipid and protein metabolism due to impaired β cell function of pancreas or insulin résistance or both. Biguanides and Sulphonyl ureas are the most commonly prescribed drugs due to their efficacy And safety. A total of 60 patients were enclosed in the present study who met the inclusion criteria. They were divided into two groups based on their treatment plan-Group A and Group B. The Group B(P=0.001)exhibited a significantly greater reduction in HbA1c as compared to Group A (P=0.002).The reduction sin FPG and PPG were also found to be significantly more in The Group B. In the present study, we observed that patients on Metformin-Teneligliptin Exhibited better control over glycemic profile as well as lipid profile when compared to patients who are on Metformin Glimepiride combination. Since this study was conducted in less number of patients, to make consecutive remarks about the superiority of either of the treatment regimen, further more analysis of clinical trials required for appropriate selection of best combination of anti-diabetic medication.

Findings: This study included the RCTs comparing glimepiride with metformin as monotherapy of T2DM. Participants in the RCTs were adult patients suffering from T2DM. Outcome measures of the treatment of T2DM included BMI (body mass index), SBP (systolic blood pressure), DBP (diastolic blood pressure), FPG (fasting plasma glucose), HbA1c (glycosylated hemoglobin level), PPBS (postprandial blood sugar), TC (total cholesterol), HDL (high-density lipoprotein), LDL (low-density lipoprotein), TG (triglycerides) and FINS (fasting plasma insulin). Sensitivity analysis also considered whether prior use of anti-diabetic drugs would affect the RCT results. It shows that only the effect of metformin on BMI became statistically significant after excluding the studies with participants who were non-responders to other sulfonyureas. The significance of the effects of metformin on TC, LDL, TG and other aspects remained the same, indicating the overall results on those aspects were robust. Meta-analysis of the subgroups with different follow-up periods (12-24 weeks and 48-60 weeks) showed that metformin moderated BMI and TC better than glimepiride in the shorter term while both drugs were equivalent in performance in all aspects except LDL in the longer term. metformin performed better than glimepiride on both BMI (0.47 [0.24, 0.69], P < 0.0001) and TC (0.50 [0.27, 0.72], P < 0.0001) in 12-24 weeks subgroup. In 48-60 weeks subgroup, metformin performed better only on LDL (0.48 [0.29, 0.67], P < 0.00001).

Note : This work was partially published at Annual Epigenetics Conference scheduled during November 28-29, 2018 in Tokyo, Japan