

Comparison of Quintuple Oral Anti-Diabetes Regimen with Standard Triple Oral Regimen in Managing Uncontrolled Type 2-Diabetes Mellitus: A Retrospective Controlled Cohort Study

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ABSTRACT

Introduction: This study aimed to assess the efficacy of incorporating a combination of SGLT2 inhibitors (SGLT2i) and thiazolidinediones (TZD) into the current triple therapy regimen (metformin+sulphonylurea+DPP4 inhibitors) for individuals with diabetes. The primary objective was to compare the outcomes of the active group, which received the supplementary treatment, with the control group, which followed the standard triple regimen without additional medications.

Methods: Participants were allocated into two groups: the active group and the control group. The active group received SGLT2i and TZD in addition to their existing triple therapy, while the control group continued with the standard triple regimen. Various clinical parameters including blood pressure, glycemic control, and lipid profiles were assessed and compared between the two groups.

Results: The active group demonstrated significant improvements in multiple clinical parameters. Notably, there were reductions in systolic blood pressure, diastolic blood pressure, HbA1c levels, and total cholesterol levels. In contrast, the control group showed more modest improvements in HbA1c levels and total cholesterol levels, but not as significant as those observed in the active group. The active group exhibited superior outcomes in terms of glycemic control, blood pressure control, and lipid profiles compared to the control group.

Conclusion: The incorporation of SGLT2i and TZD into the preexisting triple therapy regimen resulted in notable enhancements in glycemic regulation, blood pressure, and lipid profiles in individuals with diabetes. These findings support the potential benefits of adding SGLT2i and TZD as adjunct therapies in diabetes management. However, further research with larger sample sizes and longer follow-up periods is needed to validate these findings and evaluate the long-term impacts and safety characteristics of this combined treatment approach.

Keywords: SGLT2 Inhibitors, Thiazolidinediones, Triple therapy, Diabetes, Blood Pressure, Glycemic Control, Lipid profiles

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