Efficacy and Safety of Dulaglutide in the Management of Type 2 Diabetes Mellitus: A Meta-analysis of Randomized Controlled Trials

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INTRODUCTION

- As many as 328 million people worldwide had diabetes in 2013; this figure is projected to rise to 592 million, or a rise of 55%, by the year 2035.
- Drugs to treat type 2 diabetes mellitus (T2DM) include Insulin, Sulfonylurams, Metformin, Thiazolidinediones, Meglitinides, and the incretin-based therapeutic agents.

OBJECTIVE

- To assess the efficacy and safety of once-weekly Dulaglutide versus other antihyperglycemic medications in T2DM.

RESULTS

- A total of 5 RCTs evaluating 1401 patients with T2DM (698 in the intervention and 703 in the control group) were selected for this meta-analysis.
- Dulaglutide significantly lowered HbA1C levels compared with other antihyperglycemic medications and placebo (WMD = -0.254 to -1.290).

DISCUSSION

- Dulaglutide reduces both fasting and postprandial plasma glucose, though its effect on fasting plasma glucose is more robust.
- Dulaglutide exhibited a favorable safety profile with minor adverse events.

ADRs Profile and Cost

- Most common ADRs are transient and mild GI side effects such as nausea, vomiting, and diarrhea.
- Hypoglycemia risk is low.

CONCLUSION

- Our results demonstrated the positive effects of Dulaglutide on HbA1C levels, weight reduction, and fasting plasma glucose levels compared with other antihyperglycemic medications.

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