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Impact of Dipeptidyl Peptidase 4 Inhibitors on Glycemic Control in Type 2 Diabetic Patients in Saudi Arabia

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Background

Limited data if any, evaluated the use of vildagliptin on glycemic control in Saudi population. The aim of the study was to assess the efficacy and safety of vildagliptin in Saudi patients with T2DM.

Methods

Retrospective comparative cohort study was conducted between January and December 2016. Patients were stratified into four vildagliptin groups: monotherapy, added to insulin, to metformin and to the combination group (added to ≥ 2 medications). Adult patients with T2DM who have used vildagliptin for ≥ 3 months were included. Pregnant ladies, patients with severe liver or renal disease have been excluded. Percent reduction in HbA1c was the primary outcome, whereas the effect on insulin dosing requirement, hypoglycemic episodes, serious side effects and effect on weights were the secondary outcome. Baseline parametric data, primary and secondary outcomes were expressed as mean ± standard deviation. A p-value of <0.05 was considered statistically significant.

Results

A total of 286 patients met the inclusion criteria and were included in the statistical analysis. Demographic data were comparable between all groups. Baseline HbA1c 9.04 ± 1.20. At 3, 6 and 9 months, HbA1c was significantly reduced only in the combination group (8.6 ± 0.6 to 7.9 ± 1.0 p =0.026, 7.8 ± 1.0 p=0.010, 7.9 ± 0.7 p=0.025 respectively), but not in the other groups. At the end of 12 months, there was a significant reduction of HbA1c in the combination group (7.6± 0.6 p=0.001), and in mono therapy group (7.0±1.0 from 10±1, p=0.032) but not in the other groups.

Conclusion

This is the largest cohort ever performed to evaluate vildagliptin as mono or add on therapy in Saudi patients with T2DM. Use of vildagliptin improved glycemic control when given as monotherapy or add on therapy, as measured by clinically relevant reductions in HbA1c from baseline at study endpoint without significant side effects.

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