

Effects of Evogliptin as Add on in Type 2 Diabetes (T2DM) Subjects Inadequately Controlled With Metformin and Glimperide Combination

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Objective: To achieve targeted glycemic control people with diabetes required multiple drug therapy. We retrospectively studied effect of adding newly approved DPP4i evogliptin in T2DM subjects having high HbA1c value despite being on tolerable stable doses of Metformin and Glimperide. **Methods:** We retrospectively analysed the effects of evogliptin 5 mg OD over 6 month period when added to patients who were initially having HbA1c \geq 7.5% on on stable fixed dose combination of Metformin (1000-2000 mg/day) and glimiperide (2 - 4 mg/day) at least from 3 months prior. Any patients who were other OHA drugs or in Insulin of have been up or down titrated of the studied drug were excluded. We compared HbA1c, fasting (FPG), postprandrial (PPG) plasma glucose, total cholesterol (TC), triglyceride (TG), HDL, LDL at baseline and after 6months of evogliptin initiation. Self-monitored blood glucose (SMBG) was performed using the patients' own BG meter. Physicians gave all patients training to ensure they could perform SMBG correctly and accurately. **Results:** Data of 185 subjects [85(46%) females, Mean age 52.3 ± 2.8 years, mean duration of diabetes 8.2 ± 1.9], who met the inclusion criteria were extracted for analysis from the hospital and clinics records. A drop in HbA1c from 8.8 ± 1.1 to $7.8 \pm 0.5\%$ ($p < 0.05$) were resulted after addition of evogliptin. FPG decreased from 159.2 ± 13.5 to 128.3 ± 11.2 and PPG from 238.2 ± 28.7 to 188.1 ± 22.6 respectively ($p < 0.05$). Total cholesterol (TC), triglyceride (TG) were significantly improved after addition of evogliptin, whereas little effect on LDL and HDL. There was no incidence of severe hypoglycemia, though 7 (3.8%) cases of suspected hypoglycemia were managed at home. **Conclusion:** Evogliptin is a suitable add-on option for those with high HbA1c values as it offer low risk of hypoglycemia despite significant improvement in glycemic parameters.

Diabetes Mellitus and Glucose Metabolism

TYPE 2 DIABETES

Effects of Roux-en-Y Gastric Bypass on Type 2 Diabetes Mellitus

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Abstract: Bariatric surgery is the most effective treatment for classes II and III obesity patients. This surgically induced weight loss is associated with better glycemic control and higher type 2 diabetes mellitus (T2DM) remission rate compared to conventional medical therapy. Roux-en-Y gastric bypass (RYGB) is the most commonly technique performed, and its risks and benefits are well known. We sought to assess the effects of one-year post-RYGB on

glycemic control and T2DM remission in a tertiary care teaching public hospital in Porto Alegre, Southern Brazil. This retrospective cohort study included all patients submitted to RYGB between 2010 and 2019 at Hospital de Clínicas de Porto Alegre. Type 2 diabetes mellitus remission was defined as the absence of oral antidiabetic medication and insulin use in association with a glycosylated hemoglobin (HbA1c) $< 6.5\%$ one-year post-RYGB. This study was approved by the local Ethics Committee (2018-0088). A total of 549 RYGB procedures were performed from 2010 to 2019 among patients aged 42.2 ± 10.7 years, mostly women (84.7%), white (88%), and with a body mass index (BMI) of 49.4 ± 8.5 kg/m². The preoperative prevalence of T2DM was 31.2% (n=171), of which 93.6% used oral antidiabetic medication and 15.6% used insulin. Among T2DM patients, 39% used at least two oral antidiabetic drugs in association, most of them being metformin (91%) and sulfonylureas (19.3%). Preoperative fasting plasma glucose and HbA1c were 143 ± 48.1 mg/dL and $7.3 \pm 1.6\%$, respectively, reducing to 93.6 ± 21.3 mg/dL ($p < 0.001$) and $5.4 \pm 0.7\%$ ($p = 0.002$), respectively, one year after RYGB. Excess weight loss one-year post-RYGB was $68.7 \pm 17.1\%$, similar between patients with and without T2DM ($p = 0.48$). At 12 months, 77.4% of T2DM patients discontinued their oral antidiabetic drugs or insulin, and the disease remission rate was 71.3%. Bariatric surgery was effective for T2DM remission among classes II and III obesity patients, which is in accordance with the current literature.

Support: CNPq, FIPE (HCPA)

Diabetes Mellitus and Glucose Metabolism

TYPE 2 DIABETES

Efficacy and Safety of a Sodium-Glucose Co-Transporter-2 Inhibitor Versus Placebo as an Add-on Therapy for People With Type 2 Diabetes Inadequately Treated With Metformin: A Systematic Review and Meta-Analysis of Randomized Controlled Trials

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Metformin monotherapy is often insufficient to achieve or sustain glycemic targets in people with type 2 diabetes. Therefore, we performed a systematic review and meta-analysis to assess the efficacy, safety and tolerability of sodium-glucose co-transporter-2 inhibitors versus placebo as add-on therapy after metformin in type 2 diabetes. The systematic review was conducted according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines. A search was performed in the PubMed, www.clinicaltrials.gov and Cochrane Central Register of Controlled Trials databases for relevant randomized controlled trials up until 30th October 2020 that compared sodium-glucose co-transporter-2 inhibitors versus placebo as add-on therapy to metformin. A random-effects model was used. Thirteen randomized controlled trials (4270 participants) met the inclusion criteria.