A COMPARISON OF EXENATIDE AND INSULIN GLARGINE IN PATIENTS USING A SINGLE ORAL ANTIDIABETIC AGENT

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Insulin glargine (G) is a common treatment for type 2 diabetes patients (pts) when oral medications no longer provide adequate glycaemic control. Exenatide (E) is an incretin mimetic for the treatment of type 2 diabetes inadequately controlled with metformin (MET) and/or a sulfonylurea (SFU).
This randomised, two-period, open-label, crossover study compared effects between E (5µg BID for 4 wks, then 10µg BID for 12 weeks) and insulin glargine (QD titrated to fasting blood glucose≤5.6mM). Either treatment was added to ongoing single oral agent therapy (MET 56%; or SFU 44%) during two, 16-wk treatment periods. Pts (mean±SD) (age,54±9 y;weight,86±16.4kg; HbA1c,8.9±1.1%; fasting glucose,12.09±.31mM) continued their oral agent at maximal dose.
Similar reductions in HbA1c from baseline (n=114, completers) were observed during treatment periods with E (-1.43±0.09%) and glargine (-1.41±0.09%). A similar percentage of pts achieved HbA1c≤7% with E (40%) and glargine treatment (41%). HbA1c ≤6.5% was achieved by 24% of E-treated pts compared with 14% of G-treated pts (P=.056). Both treatments maintained lowered HbA1c from the first treatment period through the second treatment period. Weight reduction during the first treatment period of E (-2.35kg) was reversed by G (+2.3kg,n=55), and weight gain during the first treatment period by G (+0.75kg) was followed by weight reduction on E (-2.3kg,n=59). Overall weight change from baseline was significantly different (P<0.001) between E (-1.95kg) and G treatments (+0.35kg).Both treatments significantly decreased fasting glucose from baseline (E, -3.04±0.23mM;G, -4.17±0 .23 mM; P<0.0001, within- and between-treatment groups). E injections prior to the morning and evening meals significantly decreased 2-hr post-meal glucose excursions (both P<.001) compared with G injections. Combined 2hr glucose excursions after all 3 meals were also significantly lower in E-treated pts compared with G-treated pts (P=.036).Overall efficacy results were similar between the MET- and SFU-treated subgroups, except for greater weight reduction in pts treated with E and MET (-2.97±4.28kg)compared with pts treated with E and SFU(-0.61±2.86kg).Hypoglycemia occurred in a greater percentage of pts treated with SFU (30% E,35% G) compared with pts treated with MET (3% E,17% G; between groups, P=.01). The most common adverse events potentially related to study drug were nausea (33%) and headache (8.7%) during E and G treatments, respectively.
In pts receiving ongoing treatment with MET or an SFU, while both E and insulin G improved HbA1c and significantly decreased fasting glucose, only E significantly reduced body weight and combined 2 hour post-meal glucose excursions.