GLYCAEMIC AND WEIGHT EFFECTS OF EXENATIDE FOR DIFFERENT AGE GROUPS

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OBJECTIVES: The incretin mimetic exenatide improves glycaemic control with associated weight reduction in patients with type 2 diabetes (T2DM) treated with metformin (MET) and/or a sulphonylurea (SU), or MET and/or a thiazolidinedione. As a drug’s pharmacokinetics and pharmacodynamics can vary with age, we explored exenatide’s efficacy and safety for patients <65 y and ≥65 y in this post-hoc analysis. METHODS: Patients completing ≥3 y of exenatide treatment on background therapies of MET and/or an SU (N = 217, age 58 ± 10 y, 64% male, weight 99 ± 18 kg, HbA1c 8.2 ± 1.0%, fasting plasma glucose [FPG] 9.6 ± 2.5 mmol/L, diabetes duration 8 ± 6 y; mean ± SD) had statistically significant (P < 0.05) mean (±SE) changes in HbA1c (−1.0 ± 0.1%), FPG (−1.3 ± 0.2 mmol/L), and weight (−5.3 ± 0.4 kg). The two subgroups (baseline age <65 y, N = 161, 53 ± 7 y, and ≥65 y, N = 56, 70 ± 6 y) differed in baseline duration of diabetes (7 ± 6 y, 11 ± 6 y). RESULTS: The mean (±SE) changes in HbA1c (−0.9 ± 0.1%, −1.2 ± 0.2%), weight (−5.2 ± 0.5 kg, −5.4 ± 0.6 kg), and FPG (−1.1 ± 0.3 mmol/L, −1.8 ± 0.3 mmol/L) were not statistically different for the two subgroups (all, P > 0.1). In patients completing 3.5 y of exenatide, changes in lipids for the <65 y subgroup (N = 118) and ≥65 y subgroup (N = 33) were not statistically different, as follows (mmol/L): HDL cholesterol (+0.21 ± 0.02, +0.25 ± 0.03), LDL cholesterol (−0.28 ± 0.09, −0.37 ± 0.15), total cholesterol (−0.26 ± 0.09, −0.33 ± 0.16), and triglycerides (−0.49 ± 0.17, −0.52 ± 0.14) (all, P > 0.2). Nausea and hypoglycaemia, the most common adverse events, occurred at similar rates in both subgroups. The only case of severe hypoglycaemia occurred in a patient <65 y whose background therapies were MET and an SU. CONCLUSION: In summary, in this open-label extension study of T2DM patients treated with MET and/or an SU, exenatide exposure ≥3 y resulted in similar safety profiles and improvements in glycaemic control and lipid concentrations, with associated weight reductions for patients ≥65 y and <65 y.