

The Glycaemic Optimisation Outcomes in Diabetes (GOOD) feasibility study: glucose control and weight gain in a 1 year community-based study

N. J. Potts, C. A. Dudley, R. R. Holman

Diabetologia (2002): 45: Suppl 2: A243

Background and Aims: Attaining and maintaining optimal glucose control in type 2 diabetes is essential if complications are to be minimised, but difficult to achieve with declining beta-cell function. The Glycaemic Optimisation Outcomes in Diabetes (GOOD) feasibility study has evaluated six randomly allocated oral hypoglycaemic agent (OHA) combinations, with added basal insulin if necessary, to determine whether near normoglycaemia can be obtained in a community setting.

Materials and Methods: Patients with type 2 diabetes, aged 40 to 75 years, with HbA1C 6.2 to 10.0 % on diet or oral monotherapy, were recruited from 7 general practices. Basal glucose was optimised with a thiazolidinedione, biguanide or sulphonylurea and prandial glucose targeted simultaneously with a prandial glucose regulator, alpha-glucosidase inhibitor or rapid-acting insulin. Therapy was adjusted aiming for capillary plasma glucose values fasting <6.0 mmol/L and 2-hour post-prandial <8.0 mmol/L. Isophane and/or lispro insulin was added where glucose targets were not attained with maximal OHA therapy.

Results: 60 patients were recruited, 65% male, with mean (SD) age 61.0 (8.2) years, BMI 29.8 (5.3) kg/m², HbA1C 7.5 (0.9)% and median (IQR) diabetes duration 3 (1 to 5) years. The mean HbA1c reduction, proportion of patients achieving HbA1C <7% and mean weight change at 1 year are shown in the table below.

Conclusion: A structured approach to glucose optimisation can successfully achieve an HbA1C<7% in 72% of patients and a mean HbA1C reduction of 0.8% over 1 year in a community setting irrespective of the OHA combinations used. The overall mean weight gain over 1 year was 2.7kg.

Treatment Sequence	N	Baseline HbA1c (%)	Mean D HbA1c (%)	Propn HbA1c <7% (%)	Baseline Weight (kg)	Mean D Weight (kg)
A. Metformin +/- Lispro	11	7.1	-0.5	73	87.6	-0.9
B. Metformin +/- Repaglinide	11	7.0	-0.6	82	87.7	-0.1
C. Rosiglitazone +/- Lispro	8	7.6	-0.9	75	88.4	5.3
D. Rosiglitazone +/- Repaglinide	13	7.6	-0.9	62	85.3	3.9
E. Glipizide +/- Lispro	7	8.5	-1.5	71	93.3	3.3
F. Glipizide +/- Acarbose	10	7.6	-1.0	70	94.2	5.5
Total	60	7.5	-0.8	72	89.0	2.7

