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DEGREE OF GLYCEMIC CONTROL IN TREATED TYPE 2 DIABETIC PATIENTS WHO LIVE IN A DISTRIC OF MADRID, SPAIN

del Cañizo-Gómez FJ, Silveira-Rodríguez MB, De Gorospe-Pérez Jáuregui C, Moreno-Ruíz I, González-Losada T, Segura-Galindo A

Sección de Endocrinología y Nutrición, Hospital Universitario Infanta Leonor. Facultad de Medicina, Universidad Complutense, Madrid, Spain

INTRODUCTION

- There is a direct relation between the degree of glycemic control and the incidence and progression of diabetic complications.

- In addition improving glycemic control improves diabetic complications

AIM

- To assess the degree of glycemic control, according to published guidelines, in treated type 2 diabetes mellitus patients who live in a district of Madrid, Spain.

MATERIAL AND METHODS

- Cross-sectional study in 501 consecutive patients with T2DM who attended regularly our outpatient clinic of Endocrinology in Madrid, Spain for a routine follow-up visits.

- In addition to routine ingredients glycated haemoglobin (HbA1C) and fasting plasma glucose (FPG) were measured in all of the subjects after and overnight fast.

- Only 353 of 501 patients were self-monitoring capillary glucose by home reflectance meters. The postprandial capillary glucose (PCG) was the mean of the last postbreakfast, postlunch and postdinner capillary determinations.

- On the basis of recommendations for adults with T2DM from the ADA, we applied the following goals for our comparisons: HbA1C < 7.0%, FPG<7.2 mmol/l and PCG<10.0 mmol/l).

- The statistical comparisons between the subgroups were done adjusting for age and gender. For continuous variables analysis of covariance (ANCOVA) were used. For categorical variables logistic regression analysis was performed with the examined variable as dependent variable and age and gender as independient variables. A level of $P < 0.05$ was considered statistically significant.

RESULTS

- Mean (±S.D.) age was 65.4 ± 11.9 years, 218 (44%) were male. Ninety-six (19%) met coronary artery disease (CAD).

- Overall, 56% patients received insulin therapy alone or both insulin and oral hypoglycaemic drugs (OHD), and the remaining 44% took taking OHD alone.

- Only 41% of patients meet the recommended ADA target of HbA1C<7%, the percentage was higher among subjects taking OHD than in those on insulin (48% vs. 30%; P=0.007), whereas no significant difference for HbA1C was found between individuals with and without CAD.

- More patients reached the target for PCG than for FPG (65% vs. 27%) and there were no differences between the treatment subgroups.

Table 1. Characteristics of the study population stratified by diabetes therapy or by the presence of coronary artery disease.

	All patients (n=501)	Insulin therapy (n=282)	Oral agents (n=219)	P-value[1]	With CAD (n=96)	Without CAD (n=405)	P-value[2]
Age (years)[3]	65.4 ± 11.9	67.9 ± 10.0	62.1 ± 12.3	0.000	69.1 ± 9.3	64.5 ± 11.7	0.000
Male/Female (%)	218/283 (44/56%)	107/175 (38/62%)	111/108 (51/49%)	NS	53/43 (55/45%)	165/240 (41/59%)	0.0006
Know duration of diabetes (years)[3]	13.0 ± 9.8	16.8 ± 9.3	8.1 ± 8.1	0.000	15.7 ± 9.3	12.4 ± 9.9	0.03
HbA1C (%)[3]	7.5 ± 1.4	7.6 ± 1.3	7.3 ± 1.5	0.008	7.5 ± 1.3	7.5 ± 1.4	NS
Fasting plasma glucose (mmol/l)[3]	9.5 ± 3.5	9.4 ± 3.5	9.8 ± 3.4	NS	9.3 ± 3.8	9.5 ± 3.4	NS
Postprandial capillary glucose (mmol/l)	9.8 ± 2.3	9.9 ± 2.3	9.4 ± 2.3	0.02	9.7 ± 2.0	9.8 ± 2.4	NS
Coronary Artery Disease (%)	96 (19%)	70(25%)	26(12%)	0.001	-	-	-

CAD: Coronary artery disease; HbA1C: Glycated haemoglobin;[1]Insulin versus oral hypoglycaemic agents; [2]With versus Without CAD; [3]Mean value ± S.D.

Table 2. Glycemic control of the study population stratified by diabetes therapy or by the presence of coronary artery disease.

	All patients (n=501)	Insulin therapy (n=282)	Oral agents (n=219)	P-value[1]	With CAD (n=96)	Without CAD (n=405)	P-value[2]
HbA1C < 7%	207 (41%)	102 (30%)	105 (48%)	0.007	38 (40%)	169 (42%)	NS
Fasting plasma glucose < 7.2 mmol/l	134 (27%)	84 (30%)	50 (23%)	NS	31 (32%)	103 (25%)	NS
Postprandial capillary glucose < 10.0 mmol/l	231/353 (65%)	150/239 (63%)	81/114 (71%)	NS	50/78 (64%)	181/275 (66%)	NS

CAD: Coronary artery disease;;[1]Insulin versus oral hypoglycaemic agents; [2]With versus Without CAD.

CONCLUSIONS

- The poor glycemic control observed in the diabetic population studied, supports the need for more aggressive treatment in these patients to achieve the goals recommended by the accepted guidelines.