EFFECT OF EXENATIDE ADMINISTERED IN DIFFERENT TIMES OF FOOD INTAKE ON GLYCEMIC CONTROL AND VARIABILITY IN PATIENTS WITH DIABETES MELLITUS TYPE 2

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Exenatide is a mimetic of glucagon-like peptide-1, produces secretion of insulin and suppresses glucagon secretion. Its administration is twice a day in patients with diabetes mellitus type 2 (DM2). There is uncertainty about the best time of your management with respect to food intake, which may be reflected in improved glucose control during the course of the day. Aim: to assess the effect of the administration of exenatide in different schedules of food intake on glycemic control and variability in patients with DM2. A randomized, clinical trial was performed in 18 patients with DM2, fasting glucose 11 mmol/l, hemoglobin glycated A1c (A1C) between 7-9%. All patients received exenatide 5 μg bid, during 30 days. Different meals schedules were assigned at random, before: a) breakfast and lunch; b) lunch and dinner, and c) breakfast and dinner. At the beginning and 30 days latter A1C, glucose concentrations throughout 24 h were measured, and glycemic variability by the mean amplitude of glycemic excursion (MAGE) were calculated. Statistical analyses: Kruskal Wallis, Mann-Whitney U, Wilcoxon. Results: All groups were similar in basal characteristics. There were significant decreasing of fasting glucose (8.7±1.7 vs. 7.2±1.1 mmol/l, p = 0.046), A1C (7.9±0.7 vs. 7.0±0.7%, p = 0.028) and AUC of glucose concentrations throughout 24 h (225±61 vs. 167±36 mmol/l*h, p= 0.028) with the administration of exenatide prior breakfast and lunch. The MAGE showed a similar behavior in the 3 study groups (p = 0.148). Conclusion: Exenatide administered before breakfast and lunch showed better glycemic control in DM2 patients.