

LIRAGLUTIDE VS. LIXISENATIDE: DIFFERENT CONTINUOUS GLUCOSE MONITORING EFFECTS



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Introduction

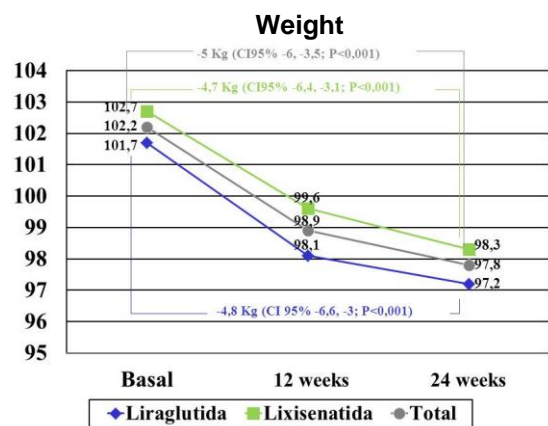
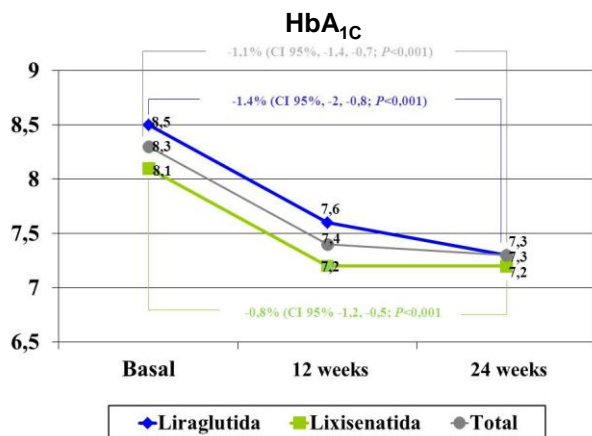
To analyze effects of glucagon-like peptide 1 (GLP-1) receptor agonist (Liraglutide or Lixisenatide) in different continuous glucose monitoring (CGM) variables in obese type 2 diabetes mellitus (T2DM) patients.

Methods

Prospective observational study with patients assigned (1:1) to be treated with Liraglutide or Lixisenatide during 24 weeks. Rest of antidiabetic treatments were adjusted through free medical decision. Basal and final retrospective CGM datas were obtained from blind retrospective CGMS Gold (Medtronic Inc.).

Results

One-hundred patients were enrolled and treated with Liraglutide (50) or Lixisenatide (50). Mean age was 56.4 yr. (range 29-74 yr.), T2DM duration of 8.7±6.9 yr. and body mass index of 38.2±5.9 Kg/m². Both treatment groups showed similar improvement in glycated haemoglobin A1c (HbA_{1c}) and body weight. Only Liraglutide patients experimented a reduction in high glucose excursion frequency (-4.5 events/CGM registry; CI 95% -8.6, -0.5; P=0.03) and area under the curve (AUC) >180 mg/dL (-31.4 mg/dL/day; CI 95% -52.1, -10.7; P=0.005). Moreover, glycemic variability, expressed as SD of 24-hours mean interstitial glucose, improved only among Liraglutide treated patients (DMC -8 mg/dL, CI 95% -15, -1; P=0.029). Nevertheless, Lixisenatide group showed a decrement in the AUC<70 mg/dL (DMC -0.1 mg/dL/day; CI 95% -0.3, -0.1; P=0.033).



	Basal				24 weeks				DMC (CI 95%; P)		
	Lira	Lixi	P	Total	Lira	Lixi	P	Total	Lira	Lixi	Total
AUC >180 mg/dL (mg/dL/24h)	35,2±35,2	16,9±23,1	0,049	25,9±30,7	4,5±6,1	4,3±5,5	0,913	4,4±5,7	-31,4 (-52,1, -10,7; P=0,005)	-1 (-22,3, 0,2; P=0,053)	-20,7 (-32,1, 9,3; P=0,001)
AUC <70 mg/dL (mg/dL/24h)	0,0±0,0	0,4±0,8	0,02	0,2±0,6	0,2±0,4	0,2±0,5	0,83	0,2±0,5	0,2 (0,0, 0,4; P=0,083)	-0,1 (-0,3, -0,1; P=0,033)	0,0 (0,1, 0,2; P=0,711)
SD (mg/dL)	41±14	38±16	0,41	40±15	30±13	31±10	0,73	31±11	-8 (-15, -1; P=0,029)	-3 (-7, -2; P=0,210)	-5 (-9, -1; P=0,011)

Conclusions

GLP-1 receptor agonists, Liraglutide and Lixisenatide, produced different glycemic effects registered through CGM system despite major classic clinical results (HbA_{1c} and weight).