

GLP-1 agonist based therapy has modest effect on weight and glycaemic control among UAE patients with diabetes: analysis of data on 3725 patients

Almazrouei Raya A, Alkaabi Fatima M, Lessan Nader, Barakat Maha T

Background and Aims:

GLP1 agonists have been available in the UAE since 2008 and are used widely to treat diabetes & obesity; both are highly prevalent with local prevalence figures of 19% and 74 % (for overweight & obesity) respectively. There are few outcome data on GLP1 agonist therapy in this population. We have investigated the effects of two commonly used GLP1 agonists on weight and glycosylated haemoglobin (HbA1c) among UAE patients with diabetes.

Materials and Methods:

Data was retrieved from a computerized database of patients attending a large diabetes center in the UAE. Patients on exenatide 2 mg weekly (n=2502) or liraglutide 0.6-1.8 mg daily (n=1223) for at least 12 months were included in the study. Data on weight and HbA1c were collected at three different time points of treatment; baseline, 6 (range 5-7) months and 12 (range 10-14) months respectively. Two-sample t test and analysis of response profile were performed as appropriate (Stata 13, Stata corp LP, Texas).

Results:

Results (table 1) are presented as mean $\pm$ standard deviation (SD). Mean weight reductions over 6 months of treatment were 1.5 and 2.7 kg for weekly exenatide and daily liraglutide respectively ($p < 0.001$). There was no further significant weight reduction with either drug at 12 months after treatment initiation. Mean HbA1c reductions after 6 months of treatment were 0.79 and 0.75 for weekly exenatide ($p < 0.001$) and daily liraglutide ($p < 0.001$) respectively ($p = 0.42$). There was no further significant change in HbA1c at 12 months with either drug. Analysis of Response profile showed statistically significant difference in rate of change over time for both weight and HbA1c in the patients who received daily liraglutide compared to weekly exenatide ($p < 0.001$).

Conclusions:

Among UAE patients with diabetes on studied GLP-1 agonists resulted in modest weight reduction (more with liraglutide) and HbA1c after 6 months of treatment with no further significant change at 1 year post treatment initiation. Further studies to identify factors associated with better response and also randomized controlled trials are warranted to investigate specific effects of GLP1 agonists amongst the study population.

Table 1. Changes in weight and glycaemic control in the population studied with time

GLP1 Agonist	Parameters	Weight (kg)			HbA1c (%)		
		W ₀	W ₁	W ₂	G ₀	G ₁	G ₂
Exenatide Weekly	n	1221	1193	641	1223	1188	934
	Mean	94.8	*93.1	*†93.4	8.7	*7.8	*7.9
	SD	16.9	16.7	16.5	1.9	1.8	1.9
Liraglutide Daily	n	2497	2440	1534	2498	2376	1902
	Mean	98.6	*95.9	*†95.6	8.1	*7.4	*†7.5
	SD	18.7	18.6	18.3	1.9	1.8	±1.8

*p<0.001 for difference compared to baseline.

†p=0.06 for difference compared to 2nd time point value.

Subscripts denote time points. ₀-baseline, ₁-month 6, ₂-month 12. SD-standard deviation