

GLP1 agonist treatment in patients with type 1 diabetes mellitus: effects on weight and glycaemic control in an Emirati population

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Objective:

Diabetes and overweight/obesity are common in the UAE, affecting 19% and 74% of the adult population respectively. GLP1 agonists are used in treatment of type 2 diabetes (T2DM) and obesity. We have previously reported a significant weight and glycosylated haemoglobin (HbA1c) reduction of around 2 kg and 0.75% respectively after 6 months of GLP1 agonist treatment in an Emirati T2DM cohort. Few outcome data on GLP1 agonist therapy use in Type 1 diabetes (T1DM) patients are available. Here, we report the effects of GLP1 agonists on weight and HbA1c in Emirati patients with T1DM.

Methods:

Information on all patients with T1DM on GLP1 agonist treatment (n=48; 15 on exenatide 2 mg weekly and 33 on liraglutide 0.6-1.8 mg daily) for over 6 months was retrieved from a computerized database of patients attending a large diabetes center in UAE. Data on weight and HbA1c were collected at baseline and 6 (range 5-7) months of treatment. Non-parametric tests (Wilcoxon) were performed (Stata 13, Stata corp LP, Texas) as appropriate.

Results:

Results are presented as median and interquartile range (IQR). There was a significant median weight reduction of 1.88 (IQR -3.8 to -0.85, $p<0.001$) kg from overall baseline median weight of 92.9 (IQR 79.7 to 104) kg. The median weight reduction with weekly exenatide was 1.7 (IQR -2.6 to 0, $p=0.008$) kg and 2 (IQR -4.4 to -1.15, $p<0.001$) kg with daily liraglutide, with no statistically significant difference in the weight reduction effect between the two drugs ($p=0.49$). GLP1 agonist therapy resulted in no significant change in glycaemic control from overall baseline HbA1c of 8.7% (IQR 8.1 to 9.6%); the change at 6 months was -0.4% (IQR -1 to 0.7 %, $p=0.35$) with no statistically significant difference between the two drugs studied.

Conclusion:

In the UAE population of T1DM patients, addition of GLP1 agonist therapy results in modest weight loss, but no significant change in glycaemic control. Our findings are in line with the limited published work in other populations and merit larger randomized trials for confirmation.