

The effect of combined treatment with SGLT2 inhibitors and GLP1 agonists on weight and glycaemic control: analysis of data on 1688 patients with type 2 diabetes

Wafa W¹, Lessan N², Barakat M T²

Imperial College London Diabetes Centre, ¹Al Ain and ²Abu Dhabi, UAE

Introduction

Both SGLT2 inhibitors and GLP1 agonists are known to have weight reducing, as well as glucose lowering properties. There is little published data on the effect of the two drugs in combination. We have investigated this in a large cohort of patients with diabetes attending a Diabetes Centre in the UAE.

Methods

A computerised database of over 170,000 patients attending a large diabetes centre in the UAE was accessed. All patients seen between October 2014 and March 2016 whose treatment included both a GLP1 agonist and an SGLT2 inhibitor for a minimum of 3 months were included, irrespective of whether the GLP1 agonist was added to the SGLT2 inhibitor or vice versa. The GLP1 agonists used were liraglutide (0.6-1.8 mg), lixisenatide (10-20 mcg), exenatide once weekly (2mg), or dulaglutide (0.75-1.5 mg) weekly. The SGLT2 inhibitors used were dapagliflozin (10mg) or canagliflozin (100-300 mg). Haemoglobin A1c, weight and BMI were measured at baseline and at intervals of 3, 6, 9 and 12 months. The age, duration of diabetes, and duration of combination therapy of each participant were recorded at the end of the study.

Results

A total of 1688 patients were included in the study. The mean age of participants was 50.5 ± 10.0 years, mean BMI was 37.5 ± 11.7 kg/m² and mean duration of diabetes was 12.0 ± 6.9 years. The mean duration of combination therapy was 5.6 ± 3.3 months. With combination therapy, there was a significant reduction in HbA1c from 8.5 ± 1.5% at baseline to 7.9 ± 1.4% at 3 months (p<0.0001); there was no further reduction at 6, 9 and 12 months. Mean weight dropped significantly from a baseline of 96.4 ± 18.8 kg to 94.7 ± 18.6 kg (p<0.0001, Δ weight 1.7 kg, 95% CI 1.5-1.8) at 3 months. A further modest but statistically significant weight loss occurred by month 6 (p < 0.0001, Δ weight 0.7kg, 95% CI 0.49-0.85) when compared with month 3. No further significant weight loss was observed thereafter.

Conclusions

In the Emirati population studied, combination treatment with SGLT2 inhibitors and GLP1 agonists and the SGLT2 inhibitors achieved a significant improvement in HbA1c of 0.6% within 3 months, with no further reduction at the subsequent time points studied. Weight loss of up to 2.3 kg continued to a nadir at 6 months.