

Real-world metabolic outcomes of semaglutide use in patients with type 2 diabetes: a retrospective study from a single centre in the United Arab Emirates

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Background:

The Glucagon-like peptide-1 receptor agonist (GLP1RA) semaglutide has shown improvements in glycaemia and other metabolic parameters for patients with type 2 diabetes (T2D) in clinical trials. Published real-world data are sparse and there are none from the Middle East where semaglutide became available in 2020.

Method and Results:

We retrospectively gathered data for 289 patients (median age 50 years (IQR 42-57), 36% female, 87% Emirati and 8% other Arab ethnicity) on continuous once weekly semaglutide injection for 6 months. At initiation median HbA1c was 7.4% (6.6-8.6) and median BMI was 35.3kg/m² (31.6-39.3). Median fall in HbA1c at 6 months was 0.7% (0.1-1.3, $p<0.001$). Median BMI fell 3.0% (0.9-6.3, $p<0.001$), significantly more in female patients [3.8% (1.1-6.7) v 2.6% (0.02-4.9) ($p=0.01$)] than in men. LDL cholesterol reduced significantly by median 0.24mmol/L (0.05-0.64, $p<0.001$), as did triglycerides which fell by 0.28mmol/L (-0.04-0.68, $p<0.001$). There was no significant change in blood-pressure, nor was there a reduction in number of medications to treat T2D, dyslipidaemia or hypertension. Comparing those switching from alternative GLP1RA ($n=106$) to the GLP1 naïve group ($n=183$), the difference in performance was small and not significant (HbA1c -0.5% vs -0.7%, and BMI -2.9% vs -3.0% respectively). Bariatric surgery did not significantly affect outcomes ($n=24$). Mean semaglutide dose over the period was 0.77mg/week (median 1mg/week). Documented adverse effects led to discontinuation in 8% of patients.

Conclusion:

We observed real-world weight loss consistent with existing clinical trial data. This bodes well for patients with obesity who may benefit further from longer treatment and higher doses of semaglutide. However, improvement in glycaemia was modest, which may partially be explained by the relatively low starting HbA1c. Patients previously taking alternative GLP1RAs improved comparably. It is unclear why women in our population lost more weight as baseline BMI was not different to men.