# Weight loss following semaglutide use in patients with type 2 diabetes who have had bariatric surgery: a retrospective study

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**Background**

Semaglutide is a GLP1 receptor agonist (GLP1RA) licensed to treat both type 2 diabetes (T2D) and obesity. Only a few small studies are published on GLP1RA use in patients who have had bariatric surgery (BS). Semaglutide has been available on an insurance funded basis in Abu Dhabi for patients with T2D since 2020.

**Objectives**

To assess outcome of semaglutide treatment for patients with T2D who had BS in our Centre in Abu Dhabi.

**Method**

A search was performed of our Centre's clinical database for patients with T2D completing at least 6 months continuous subcutaneous semaglutide treatment between October 2020 and September 2022. Demographic data, medication status, history of BS, laboratory and anthropometric measures were recorded at initiation of semaglutide and at 6, 12 and 18-months' follow-up.

**Results**

There were 3590 patients fulfilling the search criteria, of whom 325 had history of BS. For the BS group baseline mean age was 48.5±9.8 years; mean BMI 35.6±6.6 kg/$m^2$; mean HbA1c 6.5±1.3%; 74.8% were female; 90% were Emirati, 8% other Arab and 2% non-Arab; 72.3% had sleeve gastrectomy, 24.3% gastric bypass and 3.4% others including revision surgeries. 185 patients had complete data for 6 months, 84 patients for 12 months and 28 patients for 18 months intervals. Median weight loss was 5.3% (IQR 1.9-9.4), 10.0% (IQR 4.4-14.8) and 10.0% (IQR 4.3-14.2%) for each period respectively. Mean semaglutide dose was 0.89, 0.93 and 0.94 mg/week respectively. Weight loss was not associated with type of BS, initial BMI, age, starting HbA1c, insulin use, number of oral hypoglycaemic medications or use of alternative GLP1RA in the preceding 3 months. Semaglutide cessation rate before study end was not significantly different between BS and non-BS groups.

**Conclusion**

Many patients were excluded due to data gaps caused by increased remote follow-up occurring during the Covid19 pandemic. Nevertheless, this predominantly Emirati cohort is significantly larger than any other postsurgical group treated with GLP1RA described in the literature to date. Despite having T2D and taking a relatively low dose of semaglutide, this degree of real-world weight loss is meaningful, especially at 12 months and compares favourably with outcomes reported elsewhere.