Glucose and weight outcomes associated with oral semaglutide in the real-world: Initial results from the Association of British Clinical Diabetologists' (ABCD) audit

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Introduction

The ABCD oral semaglutide audit program launched in 2021 with the aim of collecting routine clinical data from users of this medication. Semaglutide is the first glucagon-like peptide 1 receptor agonist (GLP1RA) available in an oral preparation.

Previous work from the ABCD audits has demonstrated reductions in weight and HbA1c on commencement of injectable semaglutide, including in those switched from alternative GLP1RA drugs[1].

The PIONEER randomized control trial program demonstrated significant reductions in both HbA1c and weight in multiple different drug combinations. In PIONEER-1, as monotherapy, the maximum titrated dose of 14mg was associated with HbA1c reductions of 1.4% and weight reductions of 2.6kg[2].

The aim of this analysis was to assess weight and HbA1c changes associated with oral semaglutide use in a real-world UK setting.

Methods

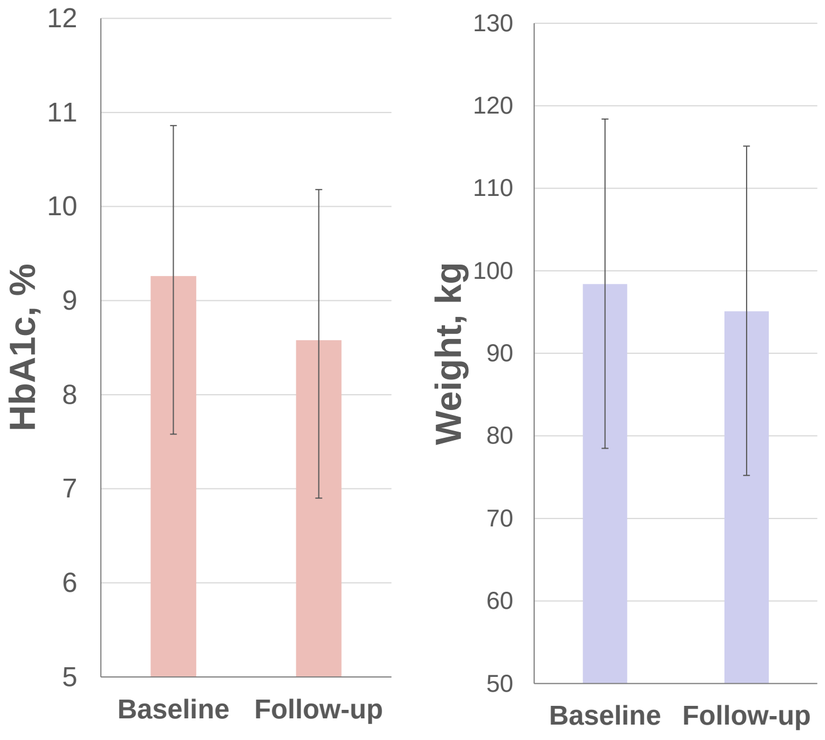
Data were extracted from the ABCD audit tool and included providing at least one follow-up visit had occurred with data present for either HbA1c or weight. Multivariate linear regression analysis was performed in Stata 16 to correct for change in co-variates. HbA1c and weight change from baseline were the key outcomes of interest.

Table 1. Baseline characteristics of observed population

Characteristic		n=350
Age, years (IQR)		59 (51-68)
Male, %		63.0%
Median diabetes duration, years (IQR)		11 (6-16)
Mean Hba1C,	% ± SD	9.2 ± 1.7
	mmol/mol ± SD	76.6 ± 18.3
Mean BMI, kg/m2 ± SD		34.3 ± 6.9
Mean weight, kg ± SD		101.8 ± 21.9

BMI, body mass index; eGFR, estimated glomerular filtration rate; BP, blood pressure; IQR, interquartile range; SD, standard deviation

Figure 1. Baseline and follow-up HbA1c (%) and weight (kg) with error bars representing standard deviation. Change significant to P<0.001



Results

In total, 350 individuals had sufficient baseline and follow-up data for inclusion. Baseline characteristics are summarized in table 1, median follow-up was 0.5 years.

Significant reductions in HbA1c of 0.7% (95%CI 0.4, 0.9; P<0.001) [7.4mmol/mol; 95%CI 4.7, 10.0; P<0.001] were observed. Weight decreased by 3.3kg (95%CI 2.3, 4.3; P<0.001) and BMI fell by 1.1kg/m2 (95%CI 0.6, 1.6; P<0.001). Baseline and follow-up weight and HbA1c are shown in Figure 1. Twice as many people achieved a HbA1c≤7.5% at follow-up compared to baseline (28.6% [52/182] vs 14.3% [26/182]) – this change was statistically significant (P<0.001).

Conclusions

In the real-world, oral semaglutide is associated with statistically significant and clinically meaningful reductions in HbA1c, weight and BMI. The numbers achieving a HbA1c≤7.5% also increased. In the light of this, further data collection and analysis should be undertaken, including comparisons between oral and injectable GLP1-RAs and analysis of switches between them.

References

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