Change in HbA1c, weight and blood pressure in the Association of British Clinical Diabetologists (ABCD) nationwide exenatide once weekly (QW) audit

R M Gifford[1], J Joharatnam[2], K Darzy[2], A Helmy[3], E McKeever[3], E Brennon[4], R Harper[4], K Sands[5], D Barnes[6], R E Ryder[7] and K A Adamson[1] on behalf of ABCD Exenatide QW Audit contributors

[1]NHS Lothian, [2]East & North Hertfordshire NHS Trust, [3]Erne South West Acute Hospital, [4]The Ulster Hospital, [5]South West Yorkshire Partnership NHS Foundation Trust, [6]Maidstone And Tunbridge Wells NHS Trust, [7]Sandwell & West Birmingham NHS Trust

Aims

The ABCD audits new pharmacotherapies for diabetes across the UK to collect real-world data on their usage, accelerate the understanding of new agents in patients in the UK and ascertain whether experience from clinical usage matches phase 3 trial data.

Methods

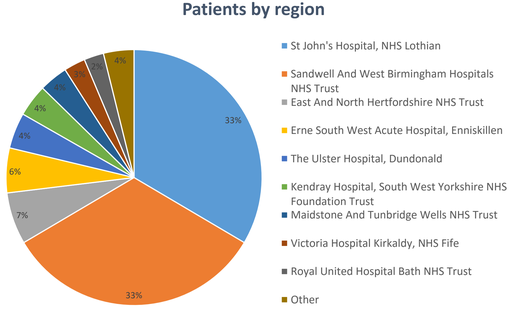
An online, password protected questionnaire was established to collect anonymized patient data, as was used successfully in ABCD audits of the older GLP1 receptor agonists (GLP1-RA), liraglutide and exenatide immediate release (IR). ABCD members (mostly practicing clinical diabetologists) were emailed to invite them to submit clinical data on their patients treated with exenatide QW. Data at baseline and first follow-up were compared using student's paired t-test.

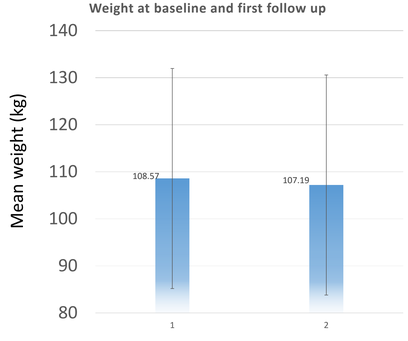
Baseline and on-treatment HbA1c, weight, BMI, blood pressure and changes in medication were examined. Patients were excluded on the basis of no follow-up data at 3 months or later (this is the minimum duration in which a new therapy could effect a change in HbA1c), n=83. Patients were also excluded for extreme values of BP, BMI, weight or HbA1c (n=5).

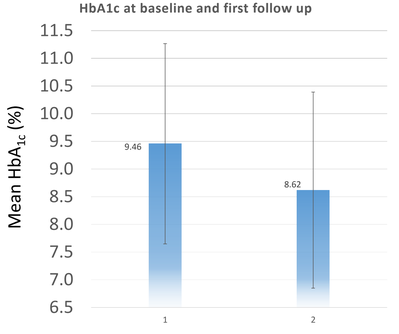
Results

19 centres across the UK submitted anonymized data on 441 patients commencing exenatide QW. The breakdown by region is shown at figure 1. 353 patients were included. Baseline characteristics were 50.6% male, 62.7% British ethnicity, mean(SD) age 56.3(10.4) years, HbA1c 9.45(1.85) %, weight 108.5(23.4) kg, BMI 37.9(7.72) kg/m2, BP 135.2(22.3) / 79.8(10.6) mmHg, median(interquartile range) diabetes duration 11(7-17) years.

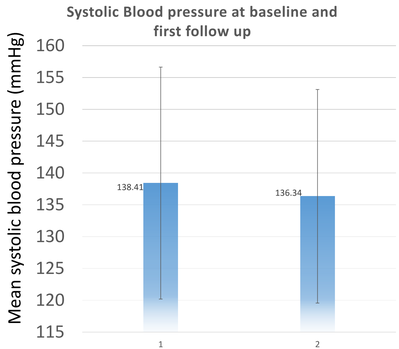
Median(interquartile range) duration to first follow up interval was 6(4-10) months, range 3-32 months.







- Mean(SD) HbA1c change at first follow-up was -0.83(1.71)%, 95% CI 0.64 - 1.02%, (P<0.0001).
- Mean(SD) weight change from baseline to first follow-up was -1.39(9.91) kg, 95% CI 0.28-2.49kg, P <0.05, and BMI -0.40(3.19) kg/m2, 95% CI 0.04 – 0.76 (P<0.05).
- Systolic blood pressure was lower at first review (mean(SD) -2.30(17.4) mmHg (95% CI 0.18-4.41mmHg, P<0.05), but not diastolic blood pressure.
- 49.2% altered other medications after commencement of exenatide QW.



Discussion

This analysis of data on patients treated with exenatide QW in real clinical practice in the UK indicate a comparable HbA1c improvement but more modest improvement in weight compared with greater, existing ABCD audit data from liraglutide once daily and exenatide twice daily.[1] This most likely reflects differences in practice in current times where exenatide QW is added to existing therapies that may be maintaining high weight such as insulin, sulphonylureas and pioglitazone without concomitant reduction in these therapies as may have happened in the past when GLP1-RA therapy was started. There may also be an impact from patients being switched from once daily or twice daily GLP1-RA therapy to the weekly preparation for sake of convenience such that one would not necessarily expect an improvement in glycaemic or weight control as a result of the change. Future investigations of the database will investigate these possible explanations for the results found.

References

(1) Ken Y Thong and Bob Ryder on behalf of the ABCD nationwide exenatide and liraglutide audits contributors. Response of HbA1c and weight against time in the Association of British Clinical Diabetologists (ABCD) nationwide exenatide and liraglutide audits. 2011 ADS/ADEA Annual Scientific Meeting Programme, Abstract 062