

One year metabolic outcomes in the Association of British Clinical Diabetologist (ABCD) Nationwide Canagliflozin Audit

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Background

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.

Aims

To evaluate the metabolic outcomes and assess clinical safety of canagliflozin-treated type 2 diabetes patients in UK.

Methods

The ABCD nationwide audit of canagliflozin in real clinical use in the UK, was launched in January 2016. Anonymised data of patients treated with canagliflozin in the UK was collected by an online password protected questionnaire:

- Patient demographics
- HbA1c, weight, BMI, Systolic BP
- Diabetes medications
- Adverse events

ABCD members, clinicians in both primary care and secondary care, were emailed to invite them to submit clinical data on their patients treated with canagliflozin.

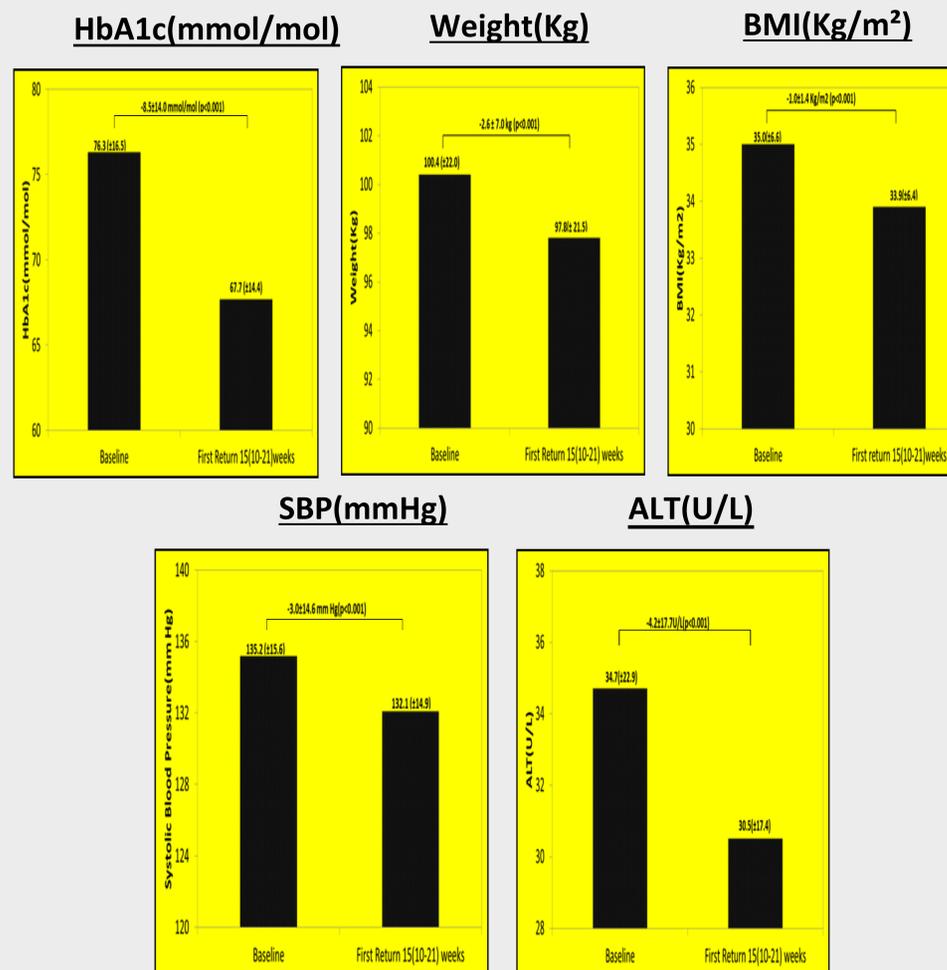
Those with baseline and follow-up HbA1c within a median (range) of 14.8(10.2-21.0) weeks, after commencing canagliflozin were included. Data at baseline and first follow-up were compared using student's paired t-test.

Baseline Characteristics

Data Input	Jan 2016 – March 2017
Centres	21
Contributors	40
Number of patients	687

	Mean±SD
Age(years)	59.8±10.8
Duration of Diabetes(years)* *Median(range)	7.0(2.7-12.0)
Sex[Males(%)]	61.8
Baseline ALT(U/l)	34.7± 22.9
Baseline HbA1c(mmol)	76.3±16.6
Baseline HbA1c(%)	9.1±1.5
BMI(Kg/m ²)	35.0± 6.6
Weight(Kg)	100.4±21.9

Results



- Mean(±SD) HbA1c fell by 8.5(±14.0)mmol/mol from 76.3(±16.5) to 67.7(±14.4) mmol/mol(n=462, p<0.001) and weight fell by 2.6(±7.0)kg from 100.4(±22.0)kg to 97.8(±21.5)kg(n=421, p<0.001)(figure).
- BMI dropped by 1.0(±1.4)kg/m² from mean of 35.0(±6.6)kg/m² to 33.9(±6.4) kg/m²(n=364,p<0.001), systolic blood pressure fell by 3.0±14.6 mmHg from a mean of 135.2±15.6mmHg to 132.1±14.9mmHg(n=444,p<0.001) and alanine aminotransferase(ALT) levels dropped by 4.2±17.7U/L from 34.7±22.9 U/L to 30.5±17.4U/L(n=315,p<0.001).
- Out of 254 patients treated with canagliflozin where data was provided, 8.2%(n=21) had genital infections requiring treatment, 2.7%(n=7) had urinary tract infection, 6.7%(n=17) had minor, 1%(n=3) moderate and 1%(n=3) severe hypoglycemia respectively. All the hypoglycemia cases were on insulin.

Side effects	n=254
Genital infections	8.2%(n=21)
UTI	2.7%(n=7)
Minor Hypoglycemia	6.7%(n=17)
Moderate Hypoglycemia	1%(n=3)
Severe Hypoglycemia	1%(n=3)

Discussion

Canagliflozin treated patients from this ABCD Nationwide audit were predominantly male, with higher BMI and poor glycaemic control.

Data analysis on type 2 diabetes patients treated with canagliflozin in real clinical practice in the UK show a reduction in HbA1c, weight, BMI, systolic blood pressure and ALT both by clinically and statistically significant amounts. Rates of genital infection and urinary tract infections were similar to those found in clinical trials. Hypoglycemia only occurred in patients on insulin.

Acknowledgement

We thank all the nationwide contributors for submitting data of patients on canagliflozin. The ABCD nationwide canagliflozin audit is supported by an unrestricted grant from Janssen. The audit was independently initiated and performed by ABCD and the authors remained independent in the analysis and the writing of this report.