HbA1c, weight,body mass index(BMI) and systolic blood pressure response to dapagliflozin : the Association of British Clinical Diabetologists (ABCD) nationwide dapagliflozin audit

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Aims

To determine the extent of metabolic response to dapagliflozin in real clinical practice in patients with type 2 diabetes in the UK.

To ascertain whether the experience in real clinical use matches the data from phase 3 clinical trials.

Methods

The ABCD nationwide audit of dapagliflozin in real clinical use in the UK, was launched in October 2014.

Anonymized data of patients treated with dapagliflozin in the UK was collected by an online password protected questionnaire :

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

Those with baseline ,1st and 2nd return HbA1c (n=317) within a median (interquartile range) of 48.0(39.0-61.0) weeks were included in this analysis.

At commencement of dapagliflozin, their diabetes medications included 80.4% metformin, 26.1% insulin (11.0% basal insulin, 12.3% basal bolus, 2.8% insulin mixtures), 29.0% sulphonylurea, 25.5% GLP-1 receptor analogues, 12.4% DPP-4 inhibitors, 5.9% pioglitazone and 1.5% other agents.

Results

Baseline Characteristics

Data Input	Oct 2014 – Dec 2015	Vs Combined Clinical Trials - Dapagliflozin
Centres	57	
Contributors	147	
Number of Patients	1725	
Age(years)	57.3±9.3	
Sex[Males(%)]	56.5	
Duration of Diabetes(years)*	9.7(3.0-14.0)	
Baseline HbA1c(mmol/mol)	80.0±16.1	
Baseline HbA1c(%)	9.5±1.4	7.96
BMI(Kg/m²)	37.0±6.8	32.16
Baseline Weight(kg)	105.9±23.2	

Reported as mean±SD or median(IQR)*

In this ABCD nationwide audit of dapagliflozin in real clinical use,147 contributors from 57 centres all over UK submitted data on 1725 patients.

We evaluated the metabolic response to dapagliflozin at 1st and 2nd return outpatient clinic visits by analysing the data using a paired t –test.

Compared to combined clinical trials of dapagliflozin, in real clinical use patients were more heavier and had poor glycaemic control.

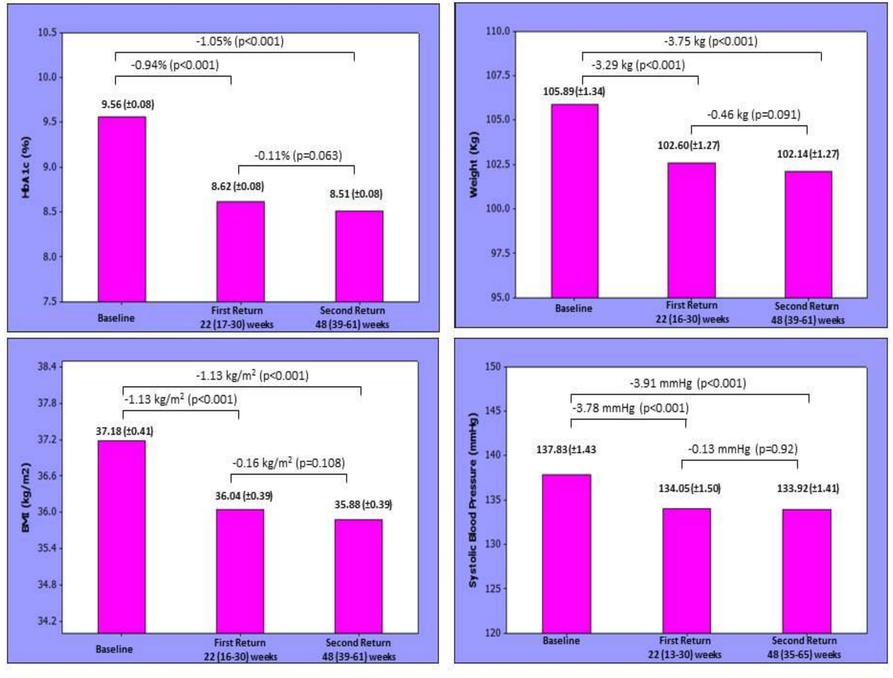

Figure: Mean (±SE) HbA1c (n=317) , weight (n=301), BMI (n=288) and systolic blood pressure (n=181), baseline vs first and second return (after median (interquartile range) weeks) to clinic following commencement of dapagliflozin.

Conclusion

Patients in the ABCD audit were much heavier and had much more poorer glycemic control than in the clinical trials.

Dapagliflozin reduced HbA1c, weight, BMI and systolic blood pressure by clinically significant amounts by first return visit and these improvements were sustained through to the second follow up visit and indeed there were further improvements although not by statistically significant amounts. The improvements applied in a wide range of real-world UK patients with type 2 diabetes on a variety of diabetes medications.

Acknowledgement

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