

Real world experience with Dapagliflozin

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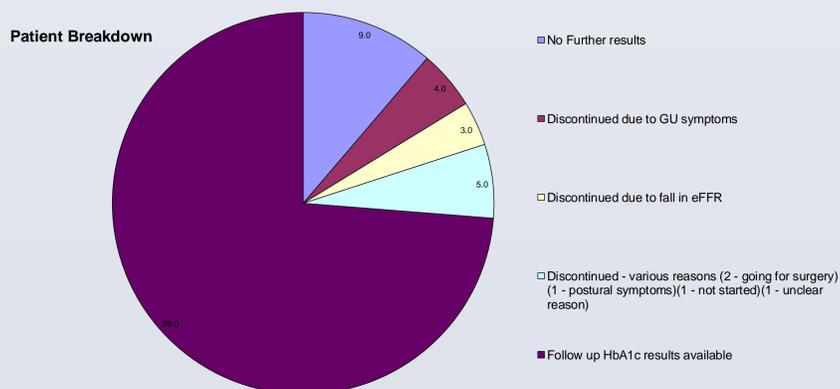
INTRODUCTION

Dapagliflozin (Forxiga) became the first Sodium-Glucose Cotransporter 2 (SGLT2) inhibitor to be introduced into clinical practice in the UK. We report our early findings on the improvement in HbA1c and weight loss in a cohort of patients initiated on Dapagliflozin in Cornwall.

METHOD

We undertook a first pass systematic audit of hospital case notes and biochemical tests for 80 patients (33 female, 47 male) with poorly controlled type 2 diabetes initiated on Dapagliflozin in specialist outpatient clinics in Cornwall. Mean age was 57 years (28 to 75). Data was collected from six months after initiation.

21 of the 80 patients were excluded from analysis. 9 patients had no further biochemical results, 4 discontinued Dapagliflozin due to genitourinary problems, 3 discontinued Dapagliflozin due to fall in eGFR, 2 due to imminent surgery, 1 due to postural symptoms, 1 did not start medication, 1 other unknown reason.



RESULTS

Follow up data was available for 59 patients (21 female, 38 male) demonstrating mean HbA1c improvement of 10.8mmol/mol (-22 to 47): Female 7.9mmol/mol (-21 to 30), Male 12.4mmol/mol (-22 to 47).

Weight loss data was available for 28 of the 59 patients treated with Dapagliflozin (13 female, 15 male) and demonstrated a mean weight loss of 6.5kg (+1.7 to -16.6): Female 7.6kg (-0.4 to 16.5), Male 5.6kg (-1.7 to 15.9).

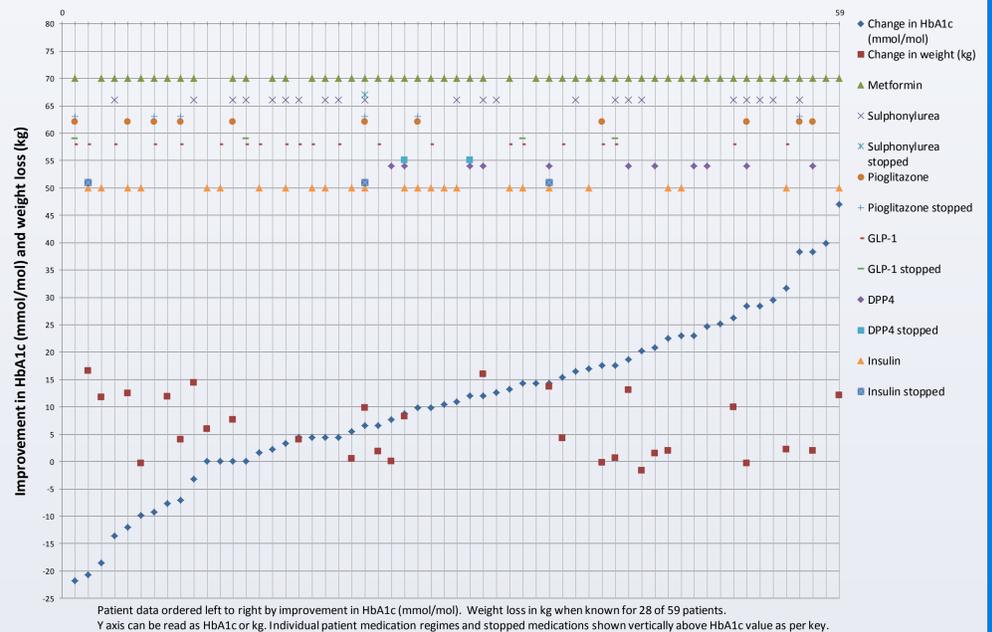
Initiation HbA1c range (mmol/mol)	Mean reduction in HbA1c (mmol/mol)	Number of patients	Mean reduction in weight (kg)	Number of patients
<61	4.51	N=4	5.15	N=2
61 - 80	6.77	N=21	9.34	N=10
81 - 100	12.20	N=27	4.83	N=14
>101	21.16	N=7	5.95	N=2

Initiation weight range (kg)	Mean reduction in weight (kg)	Number of patients
82 - 95	7.23	N=9
96 - 115	4.31	N=10
>116	8.33	N=9

Higher baseline HbA1c was associated with a greater HbA1c reduction.

Achieved weight loss was independent of baseline HbA1c and baseline weight.

RESULTS



DISCUSSION

Our experience to date indicates that for complex real world diabetic patients Dapagliflozin is effective at improving glycaemic control with HbA1c reduction equivalent to clinical trial data and weight loss greater than reported in the clinical trials¹⁻².

Discontinuation rates after initiation due to side effects (8 of 80) is higher than reported in clinical trials.

Ten patients results showed deterioration of HbA1c after treatment initiate, however six of these had other diabetic medications stopped and concordance was questioned in two of these ten patients. Five patients with worsening HbA1c lost weight. Three patients were taken off insulin.

Sources of bias may include incomplete data, time from initiation to analysis of data and non attendance at follow up clinic.

Further audit cycles will be required to establish the persistence of the positive changes in HbA1c and weight.

REFERENCES

- UK Medicines Information, Dapagliflozin. http://www.ukmi.nhs.uk/applications/ndo/record_view_open.asp?newDrugID=4403
- NICE technology appraisal guidance [TA288] <https://www.nice.org.uk/guidance/ta288/chapter/1-guidance>

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