Early 'real world' data on dapagliflozin: effective glucose control, blood pressure reduction, weight loss and reduced medication burden

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Background: Dapagliflozin is the first medication in the new class of sodium-glucose cotransporter 2 (SGLT2) inhibitors licensed in the UK. Improved glycaemic control and weight loss have been demonstrated in pre-licensing clinical trials but effectiveness in clinical practice has not yet been reported.

Design and Setting: We performed a retrospective case-note audit of all patients started on dapagliflozin in the diabetes outpatient specialist clinic of a London hospital.

Method: The audit was performed using data collected during routine clinical follow-up. Data was collected on side-effects, discontinuation of dapagliflozin, changes in HbA1c, weight, and blood pressure, and ongoing use of other diabetes medication. Patients were followed up for up to a year. We performed a logistic regression analysis to identify predictors of improvement in HbA1c and weight loss.

Results: 96 people were included in the final analysis. 42% had an HbA1c reduction ≥ 1%; 29% had no reduction. 15% had weight loss ≥5kg; three (3%) had weight loss ≥10kg; and 24% people had no weight reduction. Genital candidiasis, nocturia, and polyuria were the most common adverse effects. The rate of discontinuation of dapagliflozin due to side effects (22%) was higher than that reported in trials (3-4%). 36 (38%) of people tolerating dapagliflozin were able to stop or reduce one or more other diabetes medication.

Conclusions: Dapagliflozin is effective in real world clinical practice. It has additional benefits beyond glycaemic control; reduction of blood pressure, weight loss, and reduced need for concomitant diabetes medications. However dapagliflozin is not as well tolerated in real world patients as in participants of clinical trials.