

Submitting Author:

Dr A Puttanna

Email Address:

amarputtanna@doctors.org.uk

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Authors:

Dr A Puttanna¹, Dr M Yadagiri¹, Dr P Sen Gupta¹, Dr IW Gallen², Dr A Bicker ton³, Dr S Phillips⁴, Dr A Evans⁴, Dr D Sennik⁵, Dr REJ Ryder¹, ABCD nationwide canagliflozin audit contributors⁶

Affiliations:

¹Diabetes and Endocrinology, Sandwell and West Birmingham NHS Trust, Birmingham, UK, ²Diabetes and Endocrinology, Royal Berkshire Hospitals NHS Trust, Berkshire, UK, ³Diabetes and Endocrinology, Yeovil District Hospital NHS Trust, Yeovil, UK, ⁴Diabetes and Endocrinology, Cheltenham General Hospital, Cheltenham, UK, ⁵Diabetes and Endocrinology, Princess Alexandra Hospital, Harlow, UK, ⁶, ABCD Nationwide Canagliflozin Audit contributors, , UK

Abstract title

Two year metabolic outcomes in the Association of British Clinical Diabetologist (ABCD) Nationwide Canagliflozin Audit: a comparison of glycaemic improvements

Abstract text

Aims: The ABCD nationwide canagliflozin audit was launched in January 2016 to evaluate the efficacy of canagliflozin in a real world setting of clinical use in the United Kingdom (UK).

Methods: Two year follow up data from 21 centres across the UK on 690 patients treated with canagliflozin. Analysis was carried out on those with two follow up results during this time to analyse change in Hba1c from baseline depending on existing diabetes medications.

Results: Baseline data - male 60.2%, mean age (\pm SD) 58.9 ± 10.9 years, weight 101.3 ± 22.2 kg, BMI 34.0 ± 6.9 , Hba1c 76.3 ± 16.3 mmol/mol for the cohort. Analysis of those patients at second return revealed mean Hba1c reduction of 4 ± 13.7 mmol/mol ($n=16$, $p=0.268$) as monotherapy, 10.3 ± 13.5 mmol/mol as dual therapy ($n=143$), 10.5 ± 14.1 mmol/mol as triple therapy ($n=192$), 12.1 ± 12.6 mmol/mol ($n=50$) as quadruple therapy and 6.9 ± 12.9 mmol/mol ($n=57$) for add on to insulin \pm other oral medication; $p < 0.0001$ for all combination therapy. Stratifying for specific medications, Hba1c reductions of 10.4 ± 13.1 mmol/mol when added to metformin ($n=113$, $p < 0.0001$), 14.0 ± 14.8 mmol/mol added to sulphonyurea ($n=19$, $p=0.001$) with numbers too small for other medication analysis in dual therapy. Hba1c reductions of 10 ± 13.7 mmol/mol ($n=122$, $p < 0.0001$) when added to metformin/sulphonylurea combination, 11.6 ± 14.1 mmol/mol ($n=44$, $p < 0.0001$) when added to metformin/dpp4 inhibitor combination, 6.3 ± 6.1 mmol/mol ($n=18$, $p=0.065$) when added to basal insulin, 8.5 ± 9.2 mmol/mol ($n=19$, $p=0.001$) when added to basal bolus regime, 6.1 ± 15.5 mmol/mol ($n=20$, $p=0.096$) when added to pre-mixed insulin.

Conclusion: The results from the nationwide audit programme reveal sustained and significant reductions in Hba1c when canagliflozin is added in dual, triple or quadruple combination regimes with oral medications and also with insulin. This adds to existing clinical data, offering a real world insight into the use and glycaemic lowering effects of canagliflozin in the UK.