

Efficacy and safety of canagliflozin when used in conjunction with incretin-mimetic therapy in patients with type 2 diabetes

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Abstract

Aims

To assess the efficacy and safety of canagliflozin, a sodium glucose co-transporter 2 (SGLT2) inhibitor, in patients with type 2 diabetes enrolled in the CANagliflozin cardioVascular Assessment Study (CANVAS) who were on an incretin mimetic [dipeptidyl peptidase-4 (DPP-4) inhibitor or glucagon-like peptide-1 (GLP-1) receptor agonist].

Methods

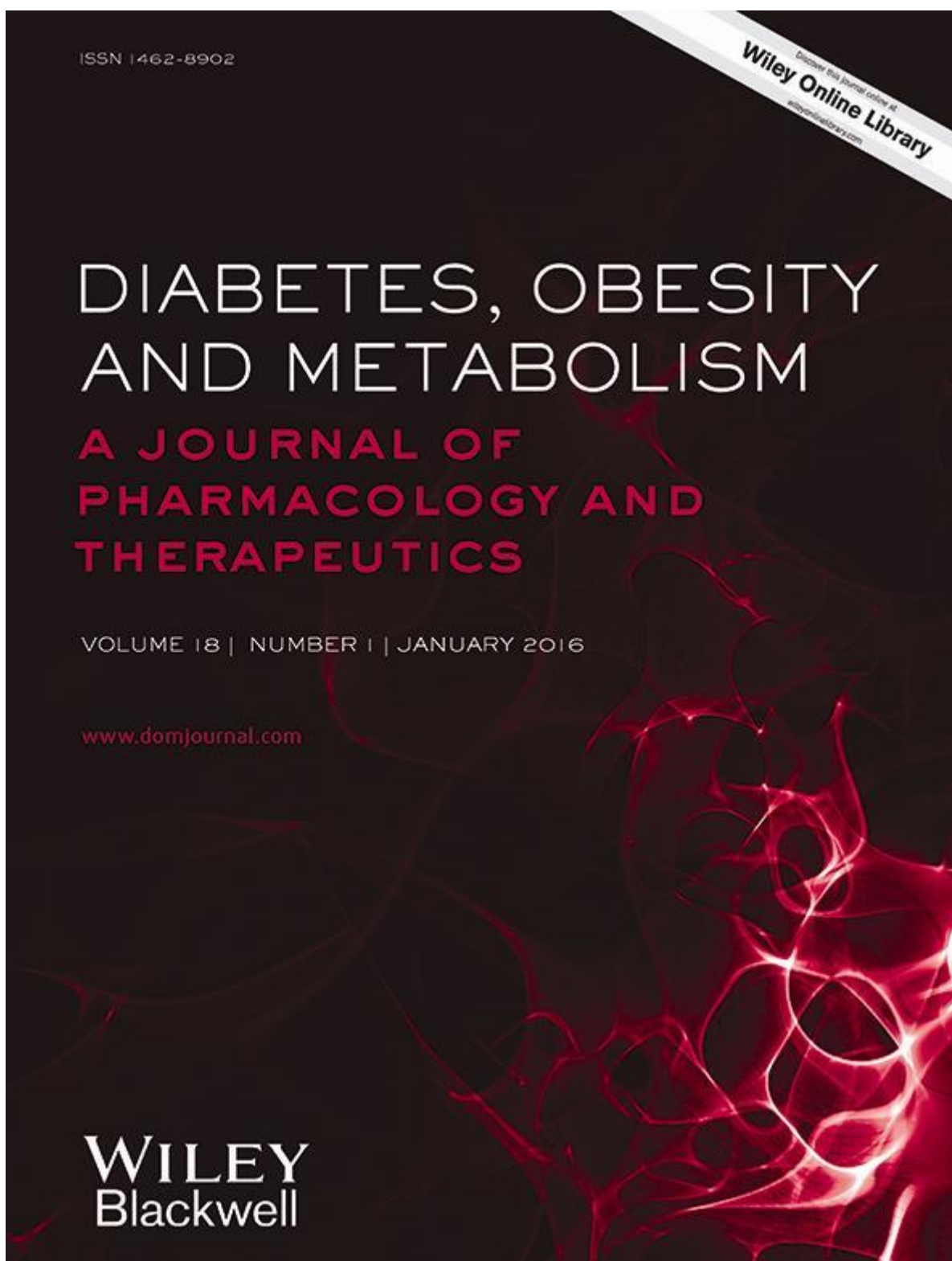
CANVAS is a double-blind, placebo-controlled study that randomized participants to canagliflozin 100 or 300 mg or placebo added to routine therapy. The present *post hoc* analysis assessed the efficacy and safety of canagliflozin 100 and 300 mg compared with placebo in subsets of patients from CANVAS who were taking background DPP-4 inhibitors or GLP-1 receptor agonists with or without other antihyperglycaemic agents at week 18.

Results

Of the 4330 patients in CANVAS, 316 were taking DPP-4 inhibitors and 95 were taking GLP-1 receptor agonists. At 18 weeks, canagliflozin 100 and 300 mg provided larger placebo-subtracted reductions in glycated haemoglobin (HbA1c) in patients taking DPP-4 inhibitors [−0.56% (95% confidence interval [CI]: −0.77, −0.35), and −0.75% (95% CI: −0.95, −0.54), respectively] and GLP-1 receptor agonists [−1.00% (95% CI: −1.35, −0.65), and −1.06% (95% CI: −1.43, −0.69), respectively]. Body weight and blood pressure (BP) reductions were seen with canagliflozin versus placebo in both subsets. Higher incidences of genital mycotic infections and osmotic diuresis-related adverse events (AEs) were seen with canagliflozin compared with placebo. The incidence of hypoglycaemia was numerically higher with canagliflozin versus placebo; nearly all events occurred in patients on background insulin or insulin secretagogues.

Conclusions

In patients on background incretin mimetics, canagliflozin improved HbA1c, body weight and BP, with an increased incidence of AEs related to SGLT2 inhibition.



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