CLINICAL INSIGHTS

BLUE CROSS Division of Blue Cross Laboratories

KYGLIP Tablets **Issue IX, No.28, 2026**

Efficacy of sitagliptin on blood pressure in patients with type 2 diabetes mellitus: a meta-analysis of randomized clinical trials

Peng L et.al; European J of Medical Res; 2026

- The present study aimed to evaluate the effects of sitagliptin therapy compared with placebo on systolic blood pressure (SBP) and diastolic blood pressure (DBP) in patients with type 2 diabetes mellitus (T2DM). T2DM is characterized by defects in insulin secretion and/or insulin action, resulting in chronically elevated blood glucose levels.
- Beyond its glucose-lowering effects, sitagliptin may exert pleiotropic benefits that contribute to the management of cardiovascular risk factors. By improving glycemic control and potentially influencing cardiovascular function, sitagliptin may help reduce the overall cardiovascular risk burden in patients with T2DM.
- Dipeptidyl peptidase-4 (DPP-4) inhibitors not only effectively lower blood glucose levels through increased glucagon-like peptide-1 (GLP-1) activity but may also exert direct beneficial effects on the vascular endothelium. These effects can enhance endothelial function and may contribute to improvements in blood pressure. Furthermore, DPP-4 inhibitors have been reported to improve arterial stiffness, lipid profiles, and inflammatory markers, all of which are associated with cardiovascular health.
- In addition to stimulating insulin secretion, GLP-1 has been shown to reduce sodium retention and promote urinary sodium excretion. These mechanisms suggest that DPP-4 inhibitor therapy may contribute to blood pressure reduction, particularly in hypertensive patients with T2DM.

The findings of this study suggest that sitagliptin has a favorable neutral-to-slightly beneficial effect on blood pressure, indicating potential cardiovascular benefits beyond glycemic control in patients with T2DM.

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