

The impact of Empagliflozin beyond glucose control : from mechanism to outcome

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Abstract

Empagliflozin is a new class of drug for lowering blood glucose levels through inhibition of the renal SGLT2 transporter. It reduces weight and blood pressure. In clinical trials it has been shown to reduce 3 point major adverse cardiovascular events and cardiovascular deaths. In the EMPAREG Outcome trial despite only small differences in HbA1c the magnitude of the difference in cardiovascular outcomes was greater than would be expected through glucose reduction. These benefits were consistent across every level of baseline HbA1c or eGFR.

Beyond these outcomes use of empagliflozin was associated with lower risk of heart failure hospitalization and progression of renal disease or incident renal outcomes. These effects support the notion that empagliflozin exerts important cardiovascular effects not mediated through HbA1c change.

Keywords

Empagliflozin, glucose, cardiovascular outcomes, SGLT2,