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Effect of empagliflozin on all-cause hospitalization in EMPA-KIDNEY

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Abstract

Background

Chronic kidney disease (CKD) increases the risk of hospitalization. In the randomized, phase III, EMPA-KIDNEY trial, empagliflozin significantly reduced the risk of all-cause hospitalizations ([ACH] first and recurrent) vs placebo.

This post-hoc analysis of the EMPA-KIDNEY trial examines the burden of ACH in CKD and the effects of empagliflozin on ACH.

Methods

Participants with CKD (n=6609) were randomized to empagliflozin 10 mg or placebo. Reasons for hospitalizations were derived from adverse events (AEs) leading to hospitalization, assessed by system organ class (SOC).

Results

1995 participants had ≥1 ACH (1895 ACH in placebo and 1611 in the empagliflozin 10 mg groups). The mortality rate over the trial period in participants with ≥1 hospitalization was 25% and risk of death was ~10 times higher vs those without (hazard ratio [HR] 9.53; 95% CI 7.18, 12.64; p <0.0001). Most common reasons for ACH were infections and infestations, surgical and medical procedures, cardiac disorders, renal and urinary disorders, and investigations. Risk of ACH was significantly reduced for empagliflozin vs placebo (HR 0.86, 99.03% CI 0.75, 0.98, p=0.0025). This was consistent regardless of baseline diabetes status, estimated glomerular filtration rate or UACR. Mean cumulative incidence of ACH in empagliflozin and placebo groups diverged shortly after randomization and continued to separate over time. Risk of hospital admissions attributed to cardiovascular (CV), renal or metabolic conditions was significantly lower with empagliflozin vs placebo (p<0.05).

Conclusions

Treatment with empagliflozin significantly reduced risk of all-cause hospitalizations, including those attributed to CV, renal, or metabolic conditions.