Dapagliflozin Improves Kidney Function Trajectory After Heart Transplantation: Study

Norway: In heart transplant recipients, dapagliflozin significantly improved the eGFR slope over 12 months compared with placebo, suggesting a potential benefit in preserving kidney function following heart transplantation.

The findings from the DAPAgliflozin for Renal protection in Heart Transplant recipients (DAPARHT) trial were published in *Circulation* by Stine Holmen of the Department of Cardiology, Oslo University Hospital, Rikshospitalet, Oslo, Norway; Innlandet Hospital Trust, Hamar, Norway; Institute of Clinical Medicine, Faculty of Medicine, University of Oslo, and colleagues.

Progressive kidney impairment is a common complication following heart transplantation, partly due to prolonged exposure to calcineurin inhibitors and underlying comorbidities. Although sodium-glucose cotransporter-2 (SGLT2) inhibitors have demonstrated kidney-protective effects in other patient populations, evidence supporting their use in heart transplant recipients has remained limited.

To investigate this, researchers conducted the multicentre, double-blind, randomized, placebo-controlled DAPARHT trial across six heart transplant centres in Northern Europe. The study enrolled 430 adult heart transplant recipients with an estimated glomerular filtration rate (eGFR) of at least 25 mL/min/1.73 m² who had undergone transplantation at least one year before enrolment.

Participants were randomly assigned to receive either dapagliflozin 10 mg once daily or matching placebo for 12 months. The primary outcome was the change in eGFR slope, assessed from two weeks after treatment initiation until the end of the blinded treatment period.

The analysis revealed the following findings:

- Patient characteristics: Between June 2022 and September 2025, 430 participants were randomized, including 217 assigned to dapagliflozin and 213 to placebo. The analysis included 424 patients with at least one post-baseline eGFR measurement. Their mean age was 53 years, 29% were women, and baseline mean eGFR was 67 mL/min/1.73 m².
- Kidney function improvement: From two weeks to 12 months of treatment, eGFR increased by 2.0 mL/min/1.73 m² in the dapagliflozin group, compared with 0.3 mL/min/1.73 m² in the placebo group.
- Between-group difference: The improvement in eGFR slope was 1.7 mL/min/1.73 m² greater with dapagliflozin, indicating a statistically significant treatment benefit.
- Safety outcomes: Researchers reported no unexpected safety concerns, with adverse events, including infections, occurring at similar rates in both groups.

The investigators concluded that dapagliflozin significantly improved the eGFR slope compared with placebo over 12 months in heart transplant recipients.

The findings suggest that SGLT2 inhibitor therapy could offer an additional strategy for preserving kidney function after heart transplantation. Given the increased risk of progressive renal impairment in these patients, dapagliflozin may have potential implications for long-term post-transplant management. Further research and longer follow-up will help establish the durability of its kidney-protective effects and its impact on clinical outcomes.

Reference: https://doi.org/10.1161/CIRCULATIONAHA.126.08376

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