Finerenone improves outcomes in patients with mild-to-moderate kidney disease and diabetes

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Finerenone reduces the risk of cardiovascular morbidity and mortality in patients with mild-to-moderate kidney disease and type 2 diabetes. That's the finding of late breaking research presented in a Hot Line session today at ESC Congress 2021 and published in the *New England Journal of Medicine*.

Diabetic kidney disease develops in approximately 40% of patients with diabetes and is the leading cause of chronic kidney disease worldwide. Some patients progress to end-stage renal disease, but most die from cardiovascular diseases and infections before needing kidney replacement therapy.

The FIDELIO-DKD trial previously reported that finerenone, a nonsteroidal mineralocorticoid receptor antagonist (MRA), slowed progression of kidney disease and improved cardiovascular outcomes in patients with predominantly advanced kidney disease and type 2 diabetes. FIGARO-DKD investigated cardiovascular and renal outcomes with finerenone treatment in patients with mild-to-moderate kidney disease and type 2 diabetes.

Regarding the study population, FIGARO-DKD enrolled adults with type 2 diabetes and mild-to-moderate kidney disease[5] treated with optimized renin–angiotensin system (RAS) blockade. As finerenone increases serum potassium levels by an average of approximately 0.2

mmol/L, patients had to have serum potassium 4.8 mmol/L or below at the run-in and screening visits (but not at randomisation) so that levels could be maintained at an optimal range for most patients, i.e. around 5.0 mmol/L or below. Nevertheless, study drug could be continued up to a potassium level of 5.5 mmol/L. Patients with symptomatic chronic heart failure with reduced ejection fraction were excluded since steroidal MRA treatment is a class 1A recommendation and withholding therapy for the duration of the trial would have been unethical.

A total of 7,437 patients in 48 countries were randomized 1:1 to oral finerenone (10 or 20 mg) or placebo once-daily. The average age was 64.1 years and 69.4% were men. The primary endpoint was a cardiovascular composite of time to cardiovascular death, nonfatal myocardial infarction, nonfatal stroke or hospitalization for heart failure.

During a median follow-up of 3.4 years, the primary endpoint occurred in 458 (12.4%) and 519 (14.2%) patients in the finerenone and placebo groups, respectively. The relative risk of this endpoint was significantly reduced by 13% with finerenone versus placebo (hazard ratio [HR] 0.87; 95% confidence interval [CI] 0.76–0.98; p=0.03). The observed cardiovascular benefit was largely driven by a 29% reduction in hospitalization for heart failure.

The key secondary outcome was a composite of kidney failure, sustained decrease in estimated glomerular filtration rate (eGFR) by 40% or more from baseline, or renal death.

This endpoint occurred in 350 (9.5%) and 395 (10.8%) patients in the finerenone and placebo groups, respectively (HR 0.87; 95% CI 0.76–1.01; p=0.07).

Regarding other secondary outcomes, the composite of kidney failure, sustained decrease in eGFR by 57% or more from baseline, or renal

death occurred in 108 (2.9%) and 139 (3.8%) patients in the finerenone and placebo groups, respectively (HR 0.77; 95% CI 0.60–0.99). End-stage kidney disease occurred in 32 (0.9%) and 49 (1.3%) patients in the finerenone and placebo groups, respectively (HR 0.64; 95% CI 0.41–