Introduction

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Diabetic kidney disease (DKD) remains an important clinical problem with substantial medical comorbidity despite many recent medical advances (1,2). More focus on the earlier identification of patients with type 2 diabetes who are at risk for developing chronic kidney disease (CKD) is needed, especially with regard to biomarkers, genetics, and high-risk phenotypes. Another key area of opportunity is the need for better clinical care models to eliminate socioeconomic and racial disparities.

Fortunately, in the past few years, new therapeutic opportunities have been discovered, and more are being considered, for possible use in improving clinical outcomes. Angiotensin receptor blockers were the last major advance for the treatment of DKD, in 2001 (3,4). The serendipitous observations of improved cardiovascular and renal outcomes with sodium–glucose cotransporter 2 (SGLT2) inhibitors and glucagon-like peptide 1 receptor agonists in cardiovascular outcomes trials were a major surprise (5–7). These observations were followed by the improved cardiorenal outcomes in two large renal protection trials in patients with DKD: the CREDENCE (Canagliflozin and Renal Events in Diabetes with Established Nephropathy Clinical Evaluation) trial (8) using the SGLT2 inhibitor canagliflozin and the FIDELIO-DKD (Finerenone in Reducing Kidney Failure and Disease Progression in Diabetic Kidney Disease) study (9) using the novel and not-yet-approved selective nonsteroidal mineralocorticoid receptor antagonist finerenone.

As more therapeutic opportunities become established, we need an improved understanding of the mechanisms underlying the progression of diabetic vascular disease and target organ damage so that newer and traditional therapeutic options can be used together most efficiently to improve clinical outcomes. We need to consider the therapeutic index of these treatments and appreciate the massive amount of pharmacopeia that patients with diabetes and CKD consume on a daily basis. Thus, to enhance the precision of therapy, we need more knowledge of the mechanisms of kidney and cardiovascular disease progression in type 2 diabetes.

The results of newer clinical trials are another important area for discussion, as well as trials that are planned or are currently underway. The newer clinical trials have been conducted in patients who are already on optimal medical therapy, including improved blood pressure control, highest tolerated doses of renin-angiotensin system blockers, and lipid-lowering therapy.

Ultimately, we need more precision in guiding pharmacotherapy given the many new therapeutic options available. This compendium will provide an updated opportunity to gauge our progress in the efforts underway to improve longer-term outcomes for patients who have diabetes and CKD.

See references starting on p. 34.

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