KDIGO(KIDNEY DISEASE IMPROVING GLOBAL OUTCOMES) 2024

HOLISTIC APPROACH FOR IMPROVING OUTCOMES IN PATIENTS WITH DIABETES AND CKD

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CHALLENGES IN DIABETES MANAGEMENT AND CKD

CKD in diabetes is underdiagnosed and therefore may not be appropriately addressed[1]

At least 67% of patients with diabetes and CKD by laboratory criteria failed to have appropriate CKD or DKD documentation in the electronic medical record.

Patients with diabetes and CKD

- Are in high-risk socioeconomic groups[2]
- Often have an insulin treatment prevalence>50%,[2,3]
- Have frequent hypo- and hyper- glycemia that may not be captured by traditional methods (finger stick blood glucose and A1c)[4,5]

Traditional monitoring of glucose control by A1C may be confounded by[5]

- Increased red blood cell turnover
- Acidosis
- Iron supplements

TREATMENT GUIDELINES FOR MANAGEMENT OF CKD[6]

Lifestyle

Healthy diet | Physical activity | Smoking cessation | Weight management

Regular risk factor assessment (every 3-6 months)

First-line drug therapy for most patients

- SGLT2i continue until dialysis or transplant
- \+ Aim for SBP <120mm Hg RAS inhibitor* at maximum tolerated dose (if HTN)
- Statin-based therapy moderate- or high-intensity statin

Targeted therapies for complications

- Manage hyperglycemia as per the KDIGO Diabetes Guideline, including use of GLP-1 RA where indicated
- Use ns-MRA in people with diabetes and an indication for use
- BP
- Dihydropyridine CCB and/or diuretic if needed to achieve individualized BP target
- Steroidal MRA if needed for resistant hypertension if eGFR ≥45
- ASCVD risk, lipids
- Antiplatelet agent for clinical ASCVD
- Ezetimibe, PCSK9i indicated based on ASCVD risk and lipids
- Use the same principles to diagnose and manage ASCVD and atrial fibrillation as in people without CKD
- Manage anemia, CKD-MBD, acidosis, and potassium abnormalities, where indicated

**ACEi or ARB (at maximal tolerated doses) should be first-line therapy HTN when albuminuria is present. Otherwise, CCB or diuretic can also be considered; all 3 classes are often needed to attain BP targets.*

A1C, glycated hemoglobin; ACEi,Angiotensin-converting enzyme inhibitors; ARB, angiotensin II receptor blocker; BP, blood pressure; ACR, albumin-to-creatinine ratio; ASCVD, atherosclerotic cardiovascular disease; CCB, calcium channel blocker; CKD, chronic kidney disease; CKD-MBD, chronic kidney disease-mineral and bone disorder; CVD, cardiovascular disease; DKD, diabetes kidney diases; GLP-1 RA, GLP-1 receptor agonist; HTN, hypertension; ns-MRA, nonsteroidal mineralocorticoid receptor antagonist; PCSK9i, proprotein convertase subtilisin/kexin type 9 inhibitor; RAS, renin-angiotensin system; SBP, systolic blood pressure; SGLT2i, sodium–glucose cotransporter-2 inhibitor; T1D, type 1 diabetes; T2D, type 2 diabetes

1. Clinical Kidney Journal, 2022, vol. 15, no. 10, 1865–1871; 2. Clemens K, et al KIDNEY360 2: 653–665, 2021; 3. Rhee et al. BMC Nephrology (2015) 16:204; 4. Qayyum, et al Blood Purif 2016;41:18–24; 5. Galindo, R et al, Endocrine Reviews, October 2020, 41(5):756–774; 6. Kidney Int. 2024 Apr;105(4S):S117-S314. doi: 10.1016/j.kint.2023.10.018.