

Putting a Stop to CKD

Dr Chiang Shu Hui Grace

SFP2022; 48(5)

Chronic kidney disease (CKD), defined as kidney damage or glomerular filtration rate (GFR) <60 mL/min/1.73 m² for three months or more, irrespective of cause, is a major global public health problem.¹ CKD is an incurable progressive disease that has become one of the most rapidly rising causes of death worldwide.^{2,3} CKD is associated with adverse outcomes of kidney failure, cardiovascular disease, and premature death, especially in people with diabetes mellitus and hypertension.^{2,3} In Singapore, CKD has become an increasingly prevalent and alarming disease in recent years. Singapore is ranked first in the world for diabetes-induced kidney failure, and fourth and seventh in the world for prevalence of kidney failure and incidence of kidney failure respectively.⁴ There are currently more than 8,500 dialysis patients in Singapore and it is estimated that 5.7 new patients are diagnosed with end-stage kidney failure in Singapore daily.⁴ Given that CKD is not only associated with a higher burden of complications, morbidity, and mortality, but also significant economic burden and poorer quality of life, it is imperative that kidney function be preserved. Preservation of kidney function results in improved health outcomes and can be achieved through a combination of non-pharmacological strategies (i.e., lifestyle and dietary modifications) and CKD-targeted and kidney disease-specific pharmacological interventions.² This issue will provide an update on the latest evidence-based treatment options in CKD management. The College is pleased to partner with AstraZeneca to conduct this Family Practice Skills Course for our doctors.

In Unit 1, A/Prof Jason Choo writes about the current management and treatment for patients with CKD. He highlights the importance that each stakeholder plays in CKD progression retardation from early detection, cause identification, management of comorbid conditions, prevention of acute kidney injury, and timely referral to specialist care.

In Unit 2, Dr Andrew Ang and A/Prof Goh Lee Gan elaborate on the pathophysiological pathways of diabetic kidney disease (DKD) and its natural history, the prevalence of DKD and its associated risk factors in Singapore, and how to delay the progression of DKD based on the latest evidence-based medicine.

In Unit 3, Dr Behram Ali Khan comprehensively discusses the complications associated with CKD and the therapeutic approaches that one can adopt to halt CKD progression. He provides a review of the associated risk factors and underlying mechanisms of CKD progression, and summarises CKD management strategies as per Kidney Disease Outcomes Quality Initiative clinical practice guideline recommendations. He also provides evidence

regarding the use of SGLT2i in slowing CKD progression and improving health-related quality of life.

This issue features ten selected current readings by A/Prof Goh Lee Gan on topics related to “Putting a Stop to CKD”. These readings include articles on how SGLT2i can improve cardiorenal outcomes of IHD patients, the role of SGLT2i in non-diabetic kidney disease, cardiovascular outcomes of glucose-lowering therapy in CKD patients, and diabetes management in CKD based on KDIGO CPG.

Also in this issue, we also have two original articles, one PRISM article, and two case reports. The first original article written by Drs Chang Wei Terk and Lydia Au provides a review of inappropriate prescribing of anticholinergic drugs in older adults. They caution against the use of drugs with anticholinergic properties as these medications when used concomitantly may result in considerable anticholinergic burden and adverse effects such as declines in cognition, quality of life and functional status.

The second original article written by Drs Liew Tatt Ian, Ho Quan Yao, Sobhana D/O Thangaraju, Lee Puay Hoo, and A/Prof Terence Kee discuss the common drug-drug interactions in kidney transplant recipients and highlights the potential interactions between immunosuppressive agents and commonly prescribed medications in the primary care setting.

The PRISM article by Drs Fung Foo Yin, Grace Michael, and Alvin Ong explores the role of oral nutritional supplements (ONS) and discusses the differences between various ONS.

The first case report by Dr Ami Nagashima illustrates the importance of pain management in cancer patients.

The second case report by Dr Lin Xin describes the role of family physicians in the management of patients with Creutzfeldt-Jakob Disease in various healthcare settings.

REFERENCES

1. K/DOQI Clinical Practice Guidelines for chronic kidney disease: Evaluation, classification, and stratification. Available at: https://www.kidney.org/sites/default/files/docs/ckd_evaluation_classification_stratification.pdf. Accessed on: 24 April 2022.
2. Kalantar-Zadeh K, Jafar TH, Nitsch D, Neuen BL, Perkovic V. Chronic kidney disease. *The Lancet*. 2021 Aug 28;398(10302):786-802.
3. Jha V, Garcia-Garcia G, Iseki K, Li Z, Naicker S, Plattner B, Saran R, Wang AY, Yang CW. Chronic kidney disease: global dimension and perspectives. *The Lancet*. 2013 Jul 20;382(9888):260-72.
4. Singapore Renal Registry Annual Report 2020. Available at: https://www.nrdo.gov.sg/docs/librariesprovider3/default-document-library/srr-annual-report-2020.pdf?sfvrsn=658dd717_0. Accessed on: 24 April 2022.