

*Editorial*

## The diabetic kidney disorder

Fengsong Gao\*

Department of Medicine, University of Queensland, Lucia, Australia

Accepted 16 September, 2021

**EDITORIAL NOTE**

Diabetic nephropathy, or diabetes-related kidney disease, is the leading cause of kidney failure. Diabetic nephropathy affects about a third of patients with diabetes. People who have diabetes plus renal disease have a worse overall outcome than people who only have kidney disease. This is due to the fact that patients with diabetes are more likely to have additional long-term medical issues such as high blood pressure, high cholesterol, and blood vessel disease. Other kidney-related disorders, such as bladder infections and nerve damage to the bladder, are more common in diabetics (Jain, 2005).

Kidneys are extraordinary organs. Millions of small blood arteries work as filters inside them. Their job is to clean the blood of waste materials. This filtering technique occasionally fails. Diabetic renal disease can lead to kidney failure. Kidney disease occurs when the kidneys lose their ability to filter waste materials. Our bodies produce waste products as a result of the protein digestion process. Millions of tiny blood arteries (capillaries) with even smaller pores serve as filters in the kidneys. Small molecules, such as waste particles, squeeze through the gaps in the blood arteries when blood flows through them. These waste products are excreted in urine.

This system can be harmed by diabetes. High blood sugar causes the kidneys to filter an excessive amount of blood. All of this additional labour is taxing on the filters. They begin to leak after a number of years, and vital protein is lost in the urine. Micro albuminuria is the presence of tiny amounts of protein in the urine. Kidney disease in people with type 1 diabetes differs slightly from that in people with type 2 diabetes. Kidney disease rarely develops in type 1 diabetic patient within the first ten years of diagnosis. Some patients with type 2 diabetes already have renal disease when they are diagnosed with diabetes (Chen, 2020).

Kidney injury can be diagnosed using blood tests that check for specific blood chemistry. Protein in the urine can also be used to detect it early. There are treatments available to assist decrease the course of renal failure. If you have diabetes, you should have your urine checked once a year. Slowing the evolution of diabetic nephropathy requires lowering blood pressure and maintaining blood sugar management. There are drugs that have been discovered that reduce the progression of kidney disease. SGLT2 inhibitors, such as dapagliflozin (Farxiga), can reduce high blood sugar levels (Grubb, 2020).

Angiotensin-converting enzyme (ACE) medications can help prevent kidney damage from progressing. ACE inhibitors, such as ramipril, quinapril (Accupril), and lisinopril (Prinivil, Zestril), are commonly prescribed to persons with diabetes to prevent complications, even if their blood pressure is normal. If you're having problems with ACE inhibitors, Angiotensin Receptor Blockers (ARBs) may be prescribed instead. Diabetes might make it harder for your body to fight infections (Shah, 2019).

High sugar levels in your blood and tissues encourage germs to proliferate, speeding up the progression of infections. The bladder, kidneys, vagina, gums, feet, and skin are all common sites for these issues. Early therapy can help you avoid more significant problems down the road. Poorly treated diabetes can damage blood vessel clusters in the kidneys, which filter waste from the blood, over time. This can harm the kidneys and raise blood pressure. High blood pressure can worsen kidney disease by raising pressure in the kidneys' sensitive filtering system (Panhwar, 2016).

**REFERENCES**

1. Chen Y, Zhang W, Wang N, Wang Y, Wang C, Wan H (2020). Thyroid Parameters and Kidney Disorder in Type 2 Diabetes: Results from the METAL Study. *J Diabet Res.* 20: 4795-4798.

---

\*Corresponding author: Fengsong Gao, E-mail: [annie.gao@uqconnect.edu.au](mailto:annie.gao@uqconnect.edu.au).

2. Grubb A (2020). Shrunken pore syndrome-a common kidney disorder with high mortality. Diagnosis, prevalence, pathophysiology and treatment options. *Clin Biochem.* 83: 12-20.
3. Jain S, Rajput A, Kumar Y, Uppuluri N, Arvind A (2005). Proteomic analysis of urinary protein markers for accurate prediction of diabetic kidney disorder. *J Assoc Phy In.* 53: 513-520.
4. Panhwar AH, Kazi TG, Afridi HI, Arain SA, Arain MS, Brahaman KD (2016). Correlation of cadmium and aluminum in blood samples of kidney disorder patients with drinking water and tobacco smoking: related health risk. *Environ Geochem Health.* 38: 265-274.
5. Shah KS, Fang JC (2019). Is heart failure with preserved ejection fraction a kidney disorder?. *Curr Hypertens Rep.* 21: 1-6.