

Beyond the Usual Suspects: The Less Common Causes of Chronic Kidney Disease

While type 2 diabetes and hypertension are the most common causes of chronic kidney disease (CKD), they are not the only ones that should be getting attention.

Diabetes and hypertension are the two most common causes of chronic kidney disease (CKD). However, there are conditions that are less frequently associated with CKD but are still significant in their ability to cause kidney damage. To effectively detect CKD early and slow disease progression, it's important that these other conditions are identified and addressed by a patient's care team.

At Healthmap Solutions (Healthmap), we help providers address all comorbidities and health concerns for patients with CKD. Using proprietary data analytics, the Healthmap team can identify and recommend clinical interventions for patients at risk of CKD progression, whether their condition is caused by diabetes, hypertension, or the less-often associated factors.

GLOMERULONEPHRITIS

Glomerulonephritis refers to a group of diseases that cause inflammation and damage to the glomeruli, the tiny filters in the kidneys. This results in excess fluids, metabolic waste, and toxins building up in the body instead of being excreted into the urine.

Symptoms may include fatigue; high blood pressure; swelling in the face, hands, feet, and belly; blood and protein in the urine; and decreased urine output.

Glomerulonephritis can be caused by a number of issues, including:

- Toxins or medicines
- Viral infections such as HIV and hepatitis B and C
- Bacterial infections such as strep or staph
- Autoimmune diseases such as lupus-related inflammation (discussed further below)
- IgA nephropathy – a form of localized inflammation that occurs when the antibody Immunoglobulin A builds up in the kidneys.

Glomerulonephritis is diagnosed through a combination of medical history, physical examination, laboratory tests, and imaging studies.

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- Blood tests are used to check for signs of inflammation and to assess kidney function. These can include a complete blood count (CBC), erythrocyte sedimentation rate (ESR), and creatinine level, among others.
 - Urine tests are used to check for the presence of blood, protein, and other abnormalities in the urine.
 - In some cases, a kidney biopsy, in which a small sample of kidney tissue is removed for microscopic examination, provides the most definitive diagnosis.

As with all the conditions on this list, treatment for glomerulonephritis will be specific to its underlying cause and severity. Options may include medications to control blood pressure, reduce inflammation, or suppress the immune system. Dietary changes such as reducing salt may also be involved.

Regular monitoring and follow-up care are important. This is an area in which Healthmap's Care Navigation team can take much of the load off busy providers and clinical staff. Our Care Navigators are registered nurses with experience in kidney care who act as an extension of the provider's office by ensuring that patients are making and keeping necessary doctor appointments and getting required tests.

LUPUS

Lupus (systemic lupus erythematosus or SLE) is an autoimmune disease in which the body's own immune system attacks healthy cells, tissues, and organs, including the kidneys. Lupus nephritis refers to the inflammation and damage done when lupus attacks kidney tissue. Symptoms may include high blood pressure, swelling in the legs and ankles, joint pain, frequent urination, skin rashes, and fatigue. Treatment options will depend on the severity of the disease.

Lupus tends to affect younger people and cause kidney disease in a population that would otherwise not have it. Lupus nephritis is more common in women, but it tends to be more aggressive in men.

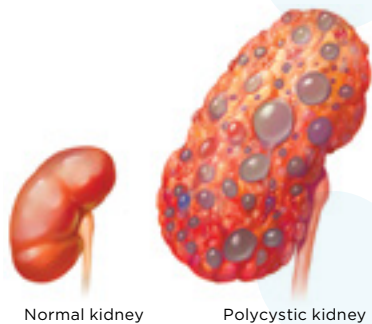
Because it's an autoimmune disease, treatment for lupus will begin with a rheumatologist. The rheumatologist should screen for kidney disease at regular intervals, even if the lupus is in remission. That screening will include a renal function panel blood test and a urine test to look for blood and protein in the urine.

If an abnormal change in the kidney function or urine is identified, the patient should be referred to a nephrologist, who will then determine how aggressive the disease is and begin the appropriate treatment. Although there are six classes of lupus nephritis, only classes 3, 4, and 5 require immunosuppressants and other heavy-acting drugs to achieve control of the disease.

POLYCYSTIC KIDNEY DISEASE

According to the Mayo Clinic,¹ “Polycystic kidney disease (PKD) is an inherited disorder in which clusters of cysts develop primarily within the kidneys, causing the kidneys to enlarge and lose function over time. Cysts are noncancerous round sacs containing fluid. Having many cysts or large cysts can damage the kidneys.”

The most common form of PKD is autosomal dominant polycystic kidney disease (ADPKD). Signs and symptoms of ADPKD often develop between the ages of 30 and 40. It’s important to remember that PKD is hereditary, and only one parent with PKD is needed to pass it to successive generations.



PKD symptoms can include:

- High blood pressure
- Back or side pain
- Blood in the urine
- A feeling of fullness in the abdomen
- Increased abdomen size due to enlarged kidneys

PKD can be a source of kidney stones and urinary tract infections and can make patients more prone to kidney infections. If a patient is suspected to have PKD, they can be screened using a kidney ultrasound. A healthy kidney may show one or two cysts, but a polycystic kidney will be completely covered in cysts, as shown in the image above.

Genetic testing may also be done to confirm the diagnosis and determine whether there is a family history of PKD. At present, there is no cure for PKD. Treatment focuses on managing the symptoms and complications of the disease. All patients with PKD should be on angiotensin-converting enzyme (ACE) inhibitors and angiotensin receptor blockers (ARBs). In addition, these patients should increase their water intake, which decreases the level of the hormone vasopressin, thereby slowing cyst growth. There are also newer therapies that can slow cyst growth, which ultimately slow the progression of kidney disease. It’s important for individuals with PKD to receive regular follow-ups from a nephrologist to monitor kidney function, manage symptoms, and quickly detect and treat complications.

KIDNEY STONES

Kidney stones are a common form of obstructive nephropathy, a condition where the flow of urine is obstructed, leading to kidney damage. Tumors and an enlarged prostate can also obstruct the urinary tract.

Diagnosis can be determined through blood and urine tests, as with other kidney conditions outlined above. Imaging studies may be used to determine the size and location of the stones.

In most cases, kidney stones may pass out of the body without treatment other than medications for pain or infection. In other instances, the stones may have to be removed surgically.

MEDICATIONS

Prescription drugs used to treat a particular condition can also cause kidney damage. According to the American Academy of Family Physicians,² “Drugs cause approximately 20 percent of community- and hospital-acquired episodes of acute renal failure. Among older adults, the incidence of drug-induced nephrotoxicity may be as high as 66 percent. Compared with 30 years ago, patients today are older, have a higher incidence of diabetes and cardiovascular disease, take multiple medications, and are exposed to more diagnostic and therapeutic procedures with the potential to harm kidney function.” It is important for healthcare providers to discuss these medications and potential complications with their patients, so that kidney injury can be avoided.

Non-prescription medications can be hazardous to kidney health as well. This may come as a surprise, since many people assume that over-the-counter medications are relatively harmless. Common pain medications like ibuprofen (found in both Motrin® and Advil®), naproxen sodium (found in Aleve®), and other NSAIDs (non-steroidal anti-inflammatory drugs) can easily be purchased without a prescription, but they can cause kidney damage if used in excess.

HOW HEALTHMAP CAN HELP

Since the Healthmap team employs licensed clinicians with experience in a wide variety of disease states, we are able to identify and manage all CKD comorbidities, including the less commonly known etiologies like the ones mentioned here. We ensure that all the patients in our program receive prompt nephrologist referrals and appropriate examinations along the way. It’s all part of our mission to promote early detection and slow kidney disease progression.

To learn more about Healthmap’s dynamic, whole-patient approach to kidney health management, visit www.healthmapsolutions.com.

¹ <https://www.mayoclinic.org/diseases-conditions/polycystic-kidney-disease/symptoms-causes/syc-20352820>

² “Drug-Induced Nephrotoxicity,” Cynthia A. Naughton, PharmD, BCPS <https://www.aafp.org/pubs/afp/issues/2008/0915/p743.html>

Image source: <https://www.mayoclinic.org/diseases-conditions/polycystic-kidney-disease/symptoms-causes/syc-20352820>

ABOUT HEALTHMAP SOLUTIONS

Healthmap Solutions is an NCQA-accredited kidney population health management company serving health plans, health systems, accountable care organizations (ACOs), and provider groups seeking a value-based solution to improve the lives of millions of Americans living with kidney disease. Using its advanced technology, predictive analytics, and clinical expertise, Healthmap emphasizes early identification of patients with kidney disease and recommends clinically proven interventions to delay or slow disease progression. Healthmap's Care Navigation team works with patients and a full spectrum of providers (primary care, nephrologists, cardiologists, endocrinologists, and dialysis providers), to deliver personalized whole-person care. Healthmap's approach is to proactively plan care transitions and optimize renal replacement therapy, with a focus on in-home dialysis treatment and transplant. This approach results in improved care, outcomes, and experience for the person living with kidney disease, while lowering total medical costs for health plans and provider groups.

To learn more about how Healthmap Solutions can help your patients with kidney disease achieve better health outcomes, please visit www.healthmapsolutions.com



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