Dr. Mohan R is a well-experienced Nephrologist in South India.

MBBS, MD (Medicine), DM (Nephrology), CDM (Diabetes)
Nephrologist and Renal Transplant Physician

About the Doctor:

Dr Mohan R is a Nephrologist at JJM Medical College, Davangere. He is one of the most eminent doctors in the speciality of Nephrology, with over 9 years of extensive experience. He has completed his super specialisation in Nephrology from SRI RAMCHANDRA MEDICAL COLLEGE AND RESEARCH INSTITUTE, Chennai. And studied MD (Internal Medicine) from JJM MEDICAL COLLEGE which is one of the prestigious medical colleges in South India. He is an active member of several Global and Indian Nephrologists' communities and is therefore very well informed on latest developments in the field.

Areas of Expertise:

- Preventive Nephrology
- Hypertension and Diabetes
- Kidney diseases
- Renal Transplantation (including High risk Kidney transplantation, Blood group incompatible Kidney Transplantation)
- Dialysis (Hemodialysis and Peritoneal)
- Critical Care Nephrology.

Achievements:

Dr Mohan is the first in Davangere to lead a team which performed successful,

1. Plasmapheresis – A method of removing blood plasma from the body by withdrawing blood, separating it into plasma and cells, and transfusing the cells back into the bloodstream. It is performed especially to remove antibodies in treating autoimmune conditions.

2. Permanent Catherization –

A permacath is a name for a **tunneled hemodialysis catheters** — Tunneled dialysis catheters are generally double-lumen catheters with a polyester cuff positioned 1 to 2 cm from the skin exit site usually on the chest.

3. CAPD –

CAPD can be carried out by the patient themselves at home and does not require a machine. Dialysate is left in the peritoneal cavity for six to eight hours allowing for equilibration and then drained out and fresh dialysate instilled. This can then be performed three to four times/day. Fluid removal relies on creating an osmotic gradient across the membrane using varying concentrations of glucose (or a glucose polymer) in the dialysate. This procedure requires a permanent catheter to be inserted into the abdomen.

- Dr Mohan along with his team have successfully performed more than 100 Live/Cadaver Kidney Transplantations.

- His compassion for the Rural Community was there for everyone to see when he used to visit villages around Davangere.
- He believes in providing his patients with the best level of medical care, while practicing empathy for his patients.
- He currently practices at Bapuji Hospital, Davangere and does online consultations also. He was previously associated with Sparsh Hospitals, Bangalore.
- He was also a Visiting/Honorary Consultant Nephrologist and Transplant Physician at Vasavi Multi-Specality Hospital, Bengaluru and Basaweshwara Medical College and Hospital, Chitradurga.

Prior Work Experience and Training

2018 - 2020	**SPARSH MULTI-SPECIALITY HOSPITAL, YESHWANTHPUR BENGALURU(A 250 bedded hospital, dedicated Nephrology unit, Kidney Transplantation team, Dialysis unit)**

	Consultant Nephrologist and Renal Transplant Physician • Manage outpatient clinics and inpatient admissions with independent charge/primary responsibility for own patients • Conduct several procedures including renal biopsies, permcath insertions, hemodialysis catheter insertions, PD catheter insertion • Manage hemodialysis unit • Part of the renal transplant team that manages live related/unrelated/ABO incompatible/high risk transplants, as well as deceased donor transplants • Conduct daily outpatient clinic and outstation Nephrology OPDs twice per month • Conduct regular academic Continued Medical Education (CMEs) for multi-department and interdepartmental clinical meets • Teach classes for Dialysis technician course and nursing students • Organize annual Walkathon for kidney patients on World Kidney Day, to raise awareness on kidney disease in the community
2015 - 2018	REGISTRAR in DEPARTMENT OF NEPHROLOGY SRMC and RI Chennai
2013 - 2015	Assistant Professor in Department Of Medicine, JJMMC Davangere

Education

2010 - 2013	JJMMC **MD General Medicine**
2003 - 2010	JJMMC **MBBS**

.Scientific Society Memberships

- International Society of Nephrology
- Indian Society of Nephrology
- American Society of Nephrology
- Indian Medical Association
- Association of Physicians of India

Notable Presentations, Awards and Publications (Non-exhaustive)

Year	Details
2020	A STUDY OF MICROVASCULAR COMPLICATIONS IN PATIENTS WITH NEWLY DETECTED DIABETES MELLITUS
2020	CLINICAL PROFILE OF PATIENTS WITH NEWLY DETECTED DIABETES MELLITUS AT A TERTIARY CARE HOSPITAL

Facilities Available at clinic

With our expert team of Nephrologist, Pathologist and state-of-the-art diagnostic and medical equipment, we provide treatment for simple to complex Nephrological Conditions, hypertension, diabetes and general conditions.

Chronic Kidney Disease (CKD) Treatment

Chronic kidney disease (CKD) means that your kidneys have suffered irreversible damage. Chronic means it is long term and CKD can get worse over time. CKD usually does not have any symptoms until your kidneys are damaged. Blood and Urine tests are used to determine the amount of kidney damage. Blood creatinine level helps to determine the level of damage to the kidneys.

The level of kidney damage in CKD is classified into 5 stages of kidney damage, from very mild damage in Stage 1 to complete kidney failure in Stage 5.

Patients with CKD can live normal, healthy lives by following lifestyle and diet changes and taking appropriate medicines for their disease.

Damage to your kidneys is usually permanent. Although the damage cannot be fixed, along with the right medical care, you can take steps to keep your kidneys as healthy as possible for as long as possible. You may even be able to stop the damage from getting worse

Hemodialysis

When the kidneys stop working, the work of the kidneys to filter blood is carried out by the dialysis process.

In the dialysis machine, the blood passes through a filter known as a dialyser, which imitates the kidney and filters out impurities and water from the blood. This process is known as Hemodialysis.

Dr. Mohan R specializes in dialysis planning, vascular access planning and dialysis prescription optimization. He believes dialysis patients should lead healthy, active lives despite being on dialysis.

He has expertise in planning advanced dialysis therapies for critical patients, such as acute hemodialysis, Slow Low-Efficiency Dialysis (SLED), and Continuous Renal Replacement Therapy (CRRT) for critical patients who have very low BP or are unstable in the intensive care unit.

Kidney Transplantation

Kidney or Renal transplant is carried out for patients with advanced kidney failure, i.e., when the kidney function is irreversibly reduced to below 15% of normal.

During a kidney transplant, a donor's kidney is placed into the body of a recipient. The damaged kidneys of the patient are not removed unless required in certain circumstances.

Traditionally, kidney transplants were performed with Blood group matched donors.
But now with advances in transplant science, even non blood group matched (ABO incompatible) donors can donate their kidneys to a recipient.

Renal transplantation is Dr Mohan R key area of interest and expertise is renal transplantation. He has vast experience in kidney transplantation at premier transplant institutes around the country. He is adept at handling complex, high risk transplants such as ABO incompatible renal transplants, second or third transplants and sensitized transplants. He is experienced in both live related and deceased donor transplantation

Kidney Biopsy

A kidney biopsy (also called renal biopsy) involves taking one or more tiny samples of the kidney to look at the kidney tissue with a special microscope, for signs of damage or disease.

A kidney biopsy is advised for one of the following reasons:

- to diagnose a suspected kidney problem
- to see how serious a kidney condition is
- to evaluate for chances of kidney recovery
- to monitor treatment for kidney disease.

- for a kidney transplant that's not working properly

Vascular Access Planning

Before beginning hemodialysis treatment, an access to a patient's bloodstream is needed; this is called a vascular access. The access allows the patient's blood to travel to and from the dialysis machine at a large volume and high speed so that toxins, waste and extra fluid can be removed from the body.

Vascular access for dialysis is of two types:

- Temporary – in the form of catheters in the neck of legs
- Permanent – in the form of Arterio venous (AV) Fistula or AV Grafts

Vascular access is the lifeline of a patients on regular hemodialysis. In India, several patients suffer due to lack of vascular access.

Dr. Mohan R and his team ensure proper and pre-emptive planning for vascular access to ensure adequate hemodialysis.

Hypertension

High blood pressure, or hypertension, is the second leading cause of kidney failure.

Most patients with high blood pressure don't have any symptoms. Organs like the eyes, heart, brain and kidneys get damaged over time due to hypertension, often without it being recognized.

Hypertension can usually be controlled with the right medications and further damage to organs can be prevented by timely intervention.

Dr. Mohan is an expert in diagnosing and treating all kinds of hypertension and hypertensive disorders. He believes in managing hypertension by providing patients with the right advice in several areas including diet, physical activity, stress-free life management techniques, along with medication.

Peritoneal Dialysis

During peritoneal dialysis, a special cleansing fluid is passed through a tube (peritoneal dialysis catheter) into the patient's abdomen. The lining of the abdomen (peritoneum) acts as a filter and removes waste products from the blood. After a set period of time, the fluid with the filtered waste products flows out of the abdomen and is discarded. This treatment can be done at home, at work or while traveling.

Dr. Mohan R specializes in planning and initiation of peritoneal dialysis. Planning involves insertion of peritoneal dialysis catheter by a doctor, and initiation involves starting the peritoneal dialysis procedure first under medical guidance, and then training of the family members and patient to continue the treatment at home.

Continuous Renal Replacement Therapy (CRRT)

Patients who are critically ill tend to have a high metabolic rate as their bodies are trying to recover from the disease. They need vasoactive drugs and continuous waste elimination while also simultaneously receiving large volumes of fluid in the form of nutritional and inotropic agents and drug infusions. Therefore, CRRT or continuous renal replacement therapy is followed so that wastes and water can be gently removed without causing hypotension.

CRRT is a slow form of haemodialysis, where the blood is removed and pumped through a hemofilter.

Peritoneal Dialysis (CPD)

During peritoneal dialysis, a fluid known as dialysate is put into the peritoneal or abdominal cavity with the help of a catheter. The dialysate is allowed to sit there for several hours while waste products pass from the capillaries into the liquid. The dialysate is then drained out.

Kidney Transplant

Patients with kidney failure have to go for dialysis or a kidney transplant. Dialysis takes time, and patients have to visit a dialysis centre frequently for treatments. But with a liver transplantation, they don't have to depend on a dialysis machine and can have a chance at leading a better quality of life.

Common Medical Procedures Used in Nephrology

There are several medical procedures that your Nephrologists may use for diagnosing, monitoring, and treating kidney diseases. Some of the most common ones are:

Ultrasound: Ultrasound is an imaging test that uses high-frequency sound waves to capture internal images of your kidneys. This test helps in the identification of abnormalities in kidneys such as a change in size and position. Moreover, it can detect the presence of obstructions involving the formation of cysts or tumors.

CT scan: As known as computed tomography, a CT scan allows doctors to capture cross-sectional images of kidneys. Sometimes the process may also be performed using intravenous contrast dye. This test can identify obstruction in organs in a more precise manner.

Biopsy: A biopsy involves removing tiny samples of tissues by inserting a thin needle. These cells from your body help healthcare professionals examine the condition in laboratories.

You doctor may conduct a biopsy for some specific reasons including:

- Assessing kidney damage
- Identifying disease processes and checking its response to treatment
- Analyzing the complications associated with transplantation

FAQ

- What are kidneys?
- The kidneys are two bean-shaped organs, each about the size of a fist. They are located just below the rib cage, one on each side of your spine.
- Healthy kidneys filter about a half cup of blood every minute, removing wastes and extra water to make urine.

- The urine flows from the kidneys to the bladder through two thin tubes of muscle called ureters, one on each side of your bladder.
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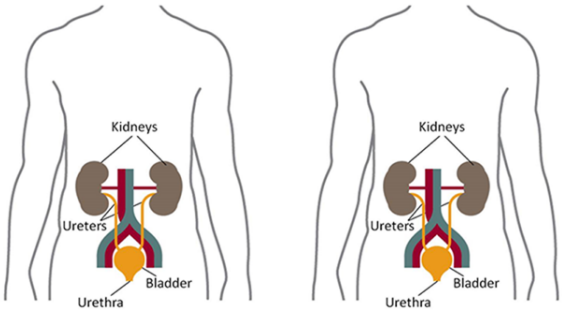
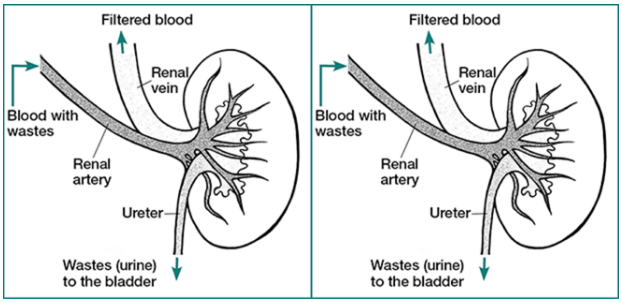
- Your bladder stores urine. Your kidneys, ureters, and bladder are part of your urinary tract.
- 

- You have two kidneys that filter your blood, removing wastes and extra water to make urine.
- ## Why are the kidneys important?
- Your kidneys remove wastes and extra fluid from your body. Your kidneys also remove acid that is produced by the cells of your body and maintain a healthy balance of water, salts, and minerals—such as sodium, calcium, phosphorus, and potassium—in your blood.
- Without this balance, nerves, muscles, and other tissues in your body may not work normally.
- Your kidneys also make hormones that help:
- control your blood pressure
- make red blood cells
- keep your bones strong and healthy
- ## Who should I consult for kidney problems?
- Patients with kidney diseases should consult a Nephrologist (Kidney specialist), who has specialized training in handling such disorders.
- In India, kidney specialists are Physicians (MD/DNB Medicine) who are further trained and board certified in Nephrology (DM/DNB Nephrology).
- ## How does blood flow through kidneys?
- Blood flows into your kidney through the renal artery. This large blood vessel branches into smaller and smaller blood vessels until the blood reaches the nephrons. In the nephron, your blood is filtered

by the tiny blood vessels of the glomeruli and then flows out of your kidney through the renal vein.

- Your blood circulates through your kidneys many times a day. In a single day, your kidneys filter about 150 L of blood. Most of the water and other substances that filter through your glomeruli are returned to your blood by the tubules. Only 1 to 2 Litres become urine.



- Your ureter carries urine from the kidney to your bladder.

Where are the kidneys and how do they function?

- There are two kidneys, each about the size of a fist, located on either side of the spine at the lowest level of the rib cage. Each kidney contains up to a million functioning units called nephrons. A nephron consists of a filtering unit of tiny blood vessels called a glomerulus attached to a tubule. When blood enters the glomerulus, it is filtered and the remaining fluid then passes along the tubule. In the tubule, chemicals and water are either added to or removed from this filtered fluid according to the body's needs, the final product being the urine we excrete.
- The kidneys perform their life-sustaining job of filtering and returning to the bloodstream about 200 quarts of fluid every 24 hours. About two quarts are removed from the body in the form of urine, and about 198 quarts are recovered. The urine we excrete has been stored in the bladder for anywhere from 1 to 8 hours.

What is the difference between acute and chronic kidney failure?

- In acute kidney failure, the kidney function is reduced or lost within a short period (over hours, days or weeks) due to various

reasons. This type of kidney failure is temporary, and usually reversible.

- Gradual progressive and irreversible loss of kidney functions over several months to years is called chronic kidney disease or chronic kidney failure. It is usually diagnosed if patient has evidence of kidney damage lasting more than 3 months, or reports suggested of irreversible loss of kidney functions. This is a non- curable disease where kidney function reduces slowly and continuously and after a long period it may reduce to a stage where the kidney stops working almost completely. This advanced and life threatening stage of disease is called end stage kidney disease.

What are some of the causes of chronic kidney disease?

- Chronic kidney disease is defined as having some type of kidney abnormality, or "marker", such as protein in the urine and having decreased kidney function for three months or longer.
- There are many causes of chronic kidney disease. The kidneys may be affected by diseases such as diabetes and high blood pressure. Some kidney conditions are inherited (run in families).
- Others are congenital; that is, individuals may be born with an abnormality that can affect their kidneys. The following are some of the most common types and causes of kidney damage.
- Diabetes is a disease in which your body does not make enough insulin or cannot use normal amounts of insulin properly. This results in a high blood sugar level, which can cause problems in many parts of your body. Diabetes is the leading cause of kidney disease.
- High blood pressure (also known as hypertension) is another common cause of kidney disease and other complications such as heart attacks and strokes. High blood pressure occurs when the force of blood against your artery walls increases. When high blood pressure is controlled, the risk of complications such as chronic kidney disease is decreased.
- Glomerulonephritis is a disease that causes inflammation of the kidney's tiny filtering units called the glomeruli. Glomerulonephritis may happen suddenly, for example, after an infection, and the individual may get well again. However, the disease may develop slowly over several years and it may cause progressive loss of kidney function.

- Polycystic kidney disease is the most common inherited kidney disease. It is characterized by the formation of kidney cysts that enlarge over time and may cause serious kidney damage and even kidney failure. Other inherited diseases that affect the kidneys include Alport's Syndrome, primary hyperoxaluria and cystinuria.
- Kidney stones are very common, and when they pass, they may cause severe pain in your back and side. There are many possible causes of kidney stones, including an inherited disorder that causes too much calcium to be absorbed from foods and urinary tract infections or obstructions. Sometimes, medications and diet can help to prevent recurrent stone formation. In cases where stones are too large to pass, treatments may be done to remove the stones or break them down into small pieces that can pass out of the body.
- Urinary tract infections occur when germs enter the urinary tract and cause symptoms such as pain and/or burning during urination and more frequent need to urinate. These infections most often affect the bladder, but they sometimes spread to the kidneys, and they may cause fever and pain in your back.
- Congenital diseases may also affect the kidneys. These usually involve some problem that occurs in the urinary tract when a baby is developing in its mother's womb. One of the most common occurs when a valve-like mechanism between the bladder and ureter (urine tube) fails to work properly and allows urine to back up (reflux) to the kidneys, causing infections and possible kidney damage.
- Drugs and toxins can also cause kidney problems. Using large numbers of over-the-counter pain relievers for a long time may be harmful to the kidneys. Certain other medications, native medicines, traditional ayurvedic medicines, local herbs, pesticides and "street" drugs such as heroin and cocaine can also cause kidney damage.

Can kidney disease be treated?

- Many kidney diseases can be treated. Careful control of diseases like diabetes and high blood pressure can help prevent kidney disease or keep it from getting worse. Kidney stones and urinary tract infections can usually be treated successfully. Unfortunately, the exact causes of some kidney diseases are still unknown, and specific treatments are not yet available for them. Sometimes, chronic kidney disease may progress to kidney failure, requiring dialysis or kidney transplantation. Treating high blood

pressure with special medications often helps to slow the progression of chronic kidney disease.

- A lot of research is being done to find more effective treatment for all conditions that can cause chronic kidney disease.

How is kidney failure treated?

- Kidney failure is treated with Renal Replacement therapy. This means that since the kidneys are not functioning – an alternative treatment is chosen to do the work of the failed kidneys. Renal replacement therapy includes – Dialysis like hemodialysis, peritoneal dialysis or- Kidney transplantation (surgical implantation of a donor kidney).
- In emergency situations – Hemodialysis (artificial cleaning of blood with the use of a filter, via the hemodialysis machine) is the preferred and life saving option of treatment.
- For long term patients - treatment with hemodialysis is generally performed at a dialysis unit /Hospital. Hemodialysis treatments are usually performed three times a week. Peritoneal dialysis is generally done daily at home. Dr Garima can explain the different approaches and help individual patients make the best treatment choices for themselves and their families.
- Kidney transplants have high success rates. The kidney may come from a living donor who may be a relative- immediate relative or distant, spouse or possibly a friend or from someone who is brain dead and whose attendants are willing to donate their organs.

What are the signs of kidney disease?

- Kidney disease usually affects both kidneys. If the kidneys' ability to filter the blood is seriously damaged by disease, wastes and excess fluid may build up in the body. Although many forms of kidney disease do not produce symptoms until late in the course of the disease, there are six warning signs of kidney disease:
    - High blood pressure.
    - Blood and/or protein in the urine.
    - A creatinine and Blood Urea Nitrogen (BUN) blood test, outside the normal range. BUN and creatinine are waste that build up in your blood when your kidney function is reduced.
    - A glomerular filtration rate (GFR) less than 60. GFR is a measure of kidney function.

- More frequent urination, particularly at night; difficult or painful urination.
- Puffiness around eyes, swelling of hands and feet

Is it possible to live with one kidney?

Yes, 1 in every 750 individuals is born with only one kidney. They lead normal, healthy lives.

Can one kidney after transplant work as well as two?

Yes. Testing has shown that a transplanted kidney can also increase in size and function over time, and it works well for several years.

Why do some people have only one kidney?

There are three main reasons why a person may have only one kidney:

- A person may be born with only one kidney. This condition is called renal agenesis. Another condition, which is called kidney dysplasia, causes a person to be born with two kidneys, but only one of them works. Most people who are born without a kidney (or with only one working kidney) lead normal, healthy lives. Being born with a single kidney is more common in males, and the left kidney is absent more often than the right one.
- A person may have had one kidney removed during an operation in order to treat an injury or a disease like cancer.
- A person may have donated one kidney to a person who needed a kidney transplant.

Can a person with one kidney participate in sports?

Physical exercise is healthy and good for you. However, it's important for someone with only one kidney to be careful and protect it from injury. This recommendation applies to anyone with a single kidney, including people who were born with one kidney and people with a kidney transplant. Some doctors think it is best to avoid contact sports like football, boxing, hockey, soccer, martial arts, or wrestling.

Wearing protective gear such as padded vests under clothing can help protect the kidney from injury during sports. This can help lessen the risk, but it won't take away the risk. Talk to your healthcare provider if you (or your child) want to join in contact sports. You

should always think about the risks involved in any activity, and carefully consider whether the risks outweigh the benefits