Department of
Nephrology

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DIABETES HOSPITAL

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ADH
NEWSLETTER

ISSUE 01 | FEBRUARY | 2021

Superspeciality Department of Nephrology, Ahalia Diabetes Hospital, Palakkad has started full fledged hemodialysis centre equipped with machines using latest German technology. The center was inaugurated by Sri. K. Krishnan Kutty, Honourable Minister of Water Resources, Govt. of Kerala on 25/01/2021. Dialysis centre is also equipped with cutting edge facilities including plasmapheresis, SLED and hemoperfusion. Dialysis is a method for blood purification, water and electrolyte balance and is indicated in acute and chronic forms of kidney failure. Nephrology department headed by Dr. Shahin Mohammed (DM Nephrology) provides management of all forms of kidney diseases.

WHAT IS KIDNEY FAILURE IN CHRONIC KIDNEY DISEASE?

Healthy kidneys remove waste products and extra water from your body, help make red blood cells, maintain electrolytes and help control blood pressure. When you have kidney failure, it means your kidneys are damaged. Kidney failure means that your kidneys don't work well enough to keep you alive. There is no cure for kidney failure, but with treatment it is possible to live a long life. High blood pressure and diabetes are the two most common causes of kidney failure.

Kidney failure does not happen overnight. It is the end result of a gradual loss of kidney function. In fact, some people do not even know they have kidney disease until their kidneys fail. Why not? Because people with early kidney disease may not have any symptoms. Symptoms usually show up late in the progression of the disease.

Healthy kidneys remove wastes and extra fluid from your blood. But when your kidneys fail, wastes and extra fluid can build up in your blood and make you feel sick. You may have some of the following symptoms:

- Nausea/vomitting
- Trouble sleeping
- Poor appetite
- Weakness
- Tiredness
- Itching
- Weight loss
- Muscle cramps (especially in the legs)
- Swelling of your feet or ankles
- Anemia (a low blood count)
- Trouble sleeping
- Decreased urine output
- Feel confused/ have trouble focussing

What are health problems in patients with renal failure?

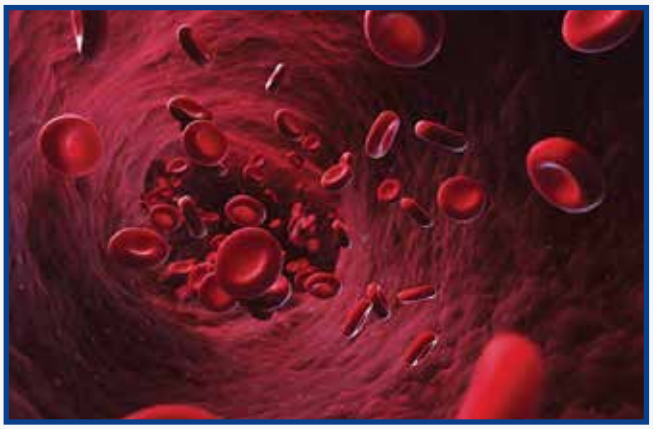
1. High blood pressure.

High blood pressure can be both a cause and a result of kidney disease. High blood pressure damages your kidneys, and damaged kidneys don't work well enough to help control your blood pressure. With kidney failure, your kidneys can't get rid of extra water. Avoid taking too much water limiting sodium and fluids in your diet, staying physically active, managing stress, and quitting smoking can help you control your blood pressure.

2. Heart disease

People with kidney disease are at high risk for heart disease, and people with heart disease are at high risk for kidney disease. The steps that you take to manage your kidney disease, blood pressure, cholesterol, and blood glucose will also help you prevent heart diseases.

3. Anemia



When kidneys are damaged, they don't make enough erythropoietin, a hormone that helps make red blood cells. Anemia can make you feel weak and lack energy.

4. Mineral bone disorder

Healthy kidneys balance the levels of calcium and phosphorus in your blood and make hormones that help keep your bones strong. As kidney function drops, ones may become thin and weak. You may feel bone or joint pain. Changes to your eating plan, medicines, supplements, and dialysis may help.

5. Itching

Itching may be because of dry skin. Using a moisturizer may help. Too much phosphorus in your blood can also cause itching. Eating less phosphorus may help stop the itching.

Treatment

Once you begin treatment for kidney failure, your symptoms will improve and you will begin to feel much better. There are two treatments for kidney failure — dialysis and kidney transplant. The dialysis treatment or transplanted kidney will take over some of the work of your damaged kidneys and remove wastes and extra fluid from your body.

It also helps in maintaining electrolytes like sodium, potassium, calcium and phosphorus in your blood, acid base balance and helps in regulation of blood pressure.

In chronic or end stage kidney failure, your kidneys do not get better and you will need dialysis for the rest of your life. But in some cases of acute kidney failure, dialysis may only be needed for a short time until the kidneys get better. There are two types of dialysis – haemodialysis and peritoneal dialysis.

What is haemodialysis?

Haemodialysis is a procedure where a dialysis machine and a special filter called an artificial kidney, or a dialyzer, are used to clean your blood. Usually a AV fistula in arm or a plastic tube called catheter is used to get access to blood. The dialyzer, or filter, has two parts, one for your blood and one for a washing fluid called dialysate. A thin membrane separates these two parts. Smaller waste products in the blood, such as urea, creatinine, potassium and extra fluid pass through the membrane and are washed away.

Haemodialysis is usually done 3 times per week for about 4 hours at a time.

Getting the right amount of dialysis improves your overall health, keeps you out of the hospital and enables you to live longer. Studies show that remaining kidney function contributes to better outcomes in dialysis patients.

The following steps will help to maintain remaining kidney function:

- Take blood pressure medicines as instructed by your doctor if you have high blood pressure. Studies show that some blood pressure medicines can help protect any remaining kidney function you may have.
- Avoid medicines that can harm your kidneys, such as pain-relieving medicines called non-steroidal anti-inflammatory drugs (NSAIDs).
- Diuretics (water pills) to help remove salt and water from your blood.
- Make sure conditions like diabetes and high blood pressure are well controlled
- Fluid and salt restriction. Patients on dialysis are advised to increase their protein intake and limit the amount of potassium, phosphorus, sodium, and fluid in their diet.

Kidney stones and diet

Kidney stones are small, hard deposits that form in the kidneys. They develop when there is a decrease in urine or an increase in certain substances, such as minerals and salts. The majority of urinary calculi are made up of calcium phosphate, calcium oxalate, uric acid or magnesium, ammonium phosphate. In India, the most common type of calcium is calcium oxalate.

Calcium oxalate stones or uric acid stones

Reduce oxalate

If u had calcium oxalate stones, you may want to avoid these foods to help reduce the amount of oxalate in your urine.

- Nuts and nuts products
- Pea nuts- which are legumes, not nuts and are high in oxalate
- Spinach
- Wheat bran

Reduce sodium

Chances of developing kidney stone increase when you eat more sodium. Sodium is part of salt. Sodium is in many canned packaged and fast foods. It is also in many condiments, seasonings and meats.

Limit animal proteins

Eating animal protein may increase your chances of developing kidney stones. Limit eating animal protein including

- Beef, chicken and pork, especially organs meats
- Eggs
- Fish and shellfish
- Milk, cheese and other dairy products

You may need to limit how much animal protein you eat in a day. Use still need to make sure you eat enough protein. Consider replacing some of the meat and animal protein you would typically eat with beans, dried peas and lentils ,which are plant based foods that are high in protein and low in oxalate.

Dietary recommendation for kidney stones

- Drink plenty of water :- 2-3 litre per day

Avoid excess intake of tea, coffee, soda and soft drinks

- Limit foods with high oxalate content :- spinach, berries, chocolate, wheat bran, nuts, tea should be eliminated
- Eat enough dietary calcium:- three serving of dietary calcium will help lower the risk of calcium stone formation. Eat with meals
- Avoid extra calcium supplements

- Eat moderate amount of proteins:- high protein intake will cause the kidney to excrete more calcium, there this may cause more stones to form in the kidney

- Avoid high salt intake:- high sodium intake increase calcium in the urine which increases the chance of developing stone
- Low salt diet is also important to control blood pressure.
- Avoid high doses of vitamin c supplements
- It is recommended to take 60mg per day. Excess amount may produce oxalate in your body.

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DR. Shahin Mohammed MBBS, MD (Paed), DM (Nephrology) is the consultant nephrologist heading the department of nephrology at Ahalia Diabetes Hospital, Palakkad. The department was established by him in november 2020. Dr. Shahin Mohammed completed his MBBS from Government Medical College, Thiruvanthapuram. He obtained second rank in Gold Medal exam in his MBBS years. He completed his MD in paediatrics from Government Medical College, Thiruvanthapuram. After which he served as senior resident at Government Medical College, Thiruvanthapuram for a year. He then completed his DM in Nephrology at SCB Government Medical College, Cuttack before joining our Institute. He has published papers in Indian Journal of Nephrology and Kidney International supplements. He has presented papers and posters at various national and international conferences. He is presently a fellow of ISN-ANIO Clinical Nephropathology Certificate program. He is also member of international Society of Nephrology. He is tranined in genreral nephrology and his areas of special intrest include acute kidney injury and glomerular diseases.