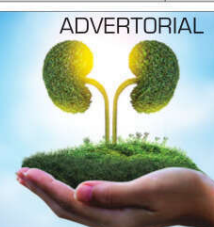




HEALTHCARE

SPECIAL FOCUS ON KIDNEY



New Advancements Bring Hope to Kidney Treatment and Health

What are the reasons of unprecedented rise in kidney disease in our country?

Kidney disease are major silent killer like cancer, heart disease, diabetes etc. and more than 75% of kidney disease are due to diabetes and Hypertension. Every second diabetic and every 5th hypertensive is victim of kidney disease. India is the capital of world diabetes. Prevalence of diabetes in India is 11.8% of population and about 77 million are suffering from diabetes, and 35% of population is suffering from hypertension. There is epidemic of kidney disease in our country 1 out of 10 patient is suffering from CKD, the peak age is 45 to 65 years. Recently kidney diseases incidence in younger population is also increasing fast because predominantly due to their sedentary life, consumption of junk food, fast food, preserved and food leading to obesity. There is an epidemic of obesity in our country, which is mother of various chronic diseases like CAD, KIDNEY DISEASE, HYPERTENSION etc. And other reasons can be due to heat stress, lack of drinkable clean water rising incidence of kidney stone disease which are common in stone belt mostly due to polluted water rich in minerals commonly in Delhi, Haryana and Punjab Etc.

What is chronic kidney disease (CKD) and what are its consequences?

CKD is defined when there is injury to kidney for more than 3 months. CKD is always characterized by irreversible and Progressive damage. Kidney functions decline slowly and slowly ultimately progress to total failure (ESRD) whose treatment is only Kidney transplant or Dialysis (Hemodialysis or peritoneal-Dialysis). -Hemodialysis is done in Hospital setting while Peritoneal Dialysis is done at home (home dialysis). Average survival on dialysis about 6 to 8 Years.

While transplant is a definite treatment, which is the miracle of science and patient leads normal life. Renal transplantation patient is live related or diseased organ transplant (cadaveric transplantation) - when kidney is transplant from brain dead patient to recipient.) Average survival on transplantation is about 16 to 18 years.

Both dialysis and transplant treatment cost is highly exorbitant in our country. Unfortunately less than 10% of Indian patient can afford such treatment and rest all dies in short period, hence prevention of kidney disease is best option.

What are various functions of kidney?

The kidney acts as a filter, excretory and hormonal/endocrine organ. The filters or nephrons remove all types of toxins produced due to dietary intake, and purifies 180 litres of blood in a day. Its excretory role is also that of removing extra water in the body through urine. As a hormonal or endocrine organ it releases various important hormones e.g., erythropoietin hormone, which builds up the haemoglobin in the blood, renin-angiotensin hormones which controls the blood pressure and the other important function is producing vitamin D to maintain the bone strength. The other most important function of the kidney is to maintain the electrolyte balance, fluid balance and acid base balance in order to maintain the internal medium of the body so that all the cells can function to their optimum. There is imbalance in these functions when kidney function get deranged.

4) What are various symptoms of (CKD)?

As mentioned, CKD is silent disease,

symptoms only appear when more than 75% of kidneys have already been damaged. In early stage, symptoms are mild and are often overlooked like easy fatigues and weakness, dyspnea on exertion usually due to development of anaemia. Other early signs are appearance of foamy/frothy urine reflecting loss of protein in urine and development of mild periorbital and pedal oedema. As the disease progresses one develops fall in urine output leading to swelling all over the body, nausea and vomiting sensation. Other manifestations of CKD are loss of appetite, weight loss, dry and itchy skin and erectile dysfunction. In young persons high blood pressure mostoften is the only manifestation of underlying kidney disease.

Chronic Kidney Disease Symptoms:

- Swollen feet or ankles
- Nausea or Vomiting
- Loss of appetite
- Too Much or not enough urination
- Trouble sleeping
- Itching

How to diagnose CKD?

It is very simple to diagnose which is cost effective

- Test morning sample of urine for albumin and Creatinine Ratio (ACR) If it is more the **30 mg/ Gm of creatinine** which is the first sign of kidney injury.
- Blood test for Serum Creatinine for determining GFR (Glomerular filtration Rate) which indicates the filtration capacity of blood from kidney. Every one should know his or her GFR values as a indicative of level of kidney functions. According to the GRF values one can decide the severity of kidney disease which is divided into five definite stages:

- G1 >90cc/min Normal kidney function
- G2 =60-89cc/min Mild decrease in kidney function.
- G3a = 45-59cc/min Mild to Moderate
- G3b = 30-44cc/min Moderate to Severe
- G4= 15-29cc/min Severely Decreased
- G5 < 15cc/min Total Kidney Failure.



An eminent nephrologist, Prof. (Dr.) Sham Sunder, Chairman-Department of Nephrology & Renal Transplant Medicine, Primus Super Speciality Hospital, New Delhi, shares invaluable information about kidney health from his vast experience of over three decades, both in the public and private health sectors.

How to Slow down the progression of Kidney Failure? (PREVENTION OF CKD).

Prevention is always better than cure, Ounce of prevention is better than pound of cure.

If kidney disease is diagnosed in very early stage one can certainly slow down the progressive decline of kidney functions and requirement of Dialysis and transplant can be delayed even by many years by multi-prong strategic approach.

There is a good news also that,

are being used to slow down the decline of renal functions. Rest is good control of blood sugar, blood pressure, Acidosis and treatment of anaemia etc. By good conservative treatment one can delay development of ESRD and requirement of dialysis by even more than 18 to 20 years.

When do dialysis and kidney transplantation become unavoidable?

On a scale of 5 different stages of kidney disease, the GFR in stage 3 is less than 60 percent which is the onset of kidney failure. In stage five when the GFR is less than 15, it means that the patient has approached near total failure. The only two treatment options available then are dialysis or kidney transplantation. Dialysis are of two types-haemodialysis and peritoneal dialysis where the latter is also known as domicile dialysis as it can be done from home. In contrast, haemodialysis, is a 4 hours process for which a patient has to visit the hospital. But with advancements, ambulatory haemodialysis is a reality where it can be done from home. Kidney transplant is a definite treatment which leads to normal life. It is miracle of science!

Preventive Strategies of Kidney Disease in high-risk patients- High risk group of patients as follows -

- Diabetes
- Hypertension
- Family history of Chronic kidney disease (Inherited kidney diseases)
- Obesity
- Patient having the history of regular intake of Pain killers, Alternate medicines.
- patient having the history of Renal stone Disease or recurrent urinary tract infections.

All above patients must go annual checkup for blood test for renal functions , urine test for albumin and ultrasound abdomen for KUB to identify kidney disease at earliest stage for both prevention and treatment.

How can you protect your Kidneys?

There are 8 golden rules to protect

our Kidney:

- Lifestyle modification - keep yourself physically active by regular physical exercises, meditation and keep your body weight under control, Which is extremely important.
- Extra body weight puts lot of load on kidney and heart. Say big no to junk food, low salt, low sugar, diet, acid animal-based protein.
- If you are smokers stop smoking as tobacco is injurious to kidney by decreasing blood flow to kidneys.
- Take at-least 6 to 8 glass of water daily which will help flushing out all the toxins from the body via urine. It is also help prevention of urine infection and kidney stone disease.
- Avoid painkillers and alternate medicine
- 6) If you are suffering from high blood pressure, 24 hours control of blood pressure is desirable. In younger subject it should be 120/70mm/HG and in elderly it may 140/80mm/HG
- If you are Diabetic Maintain your HBA1c between 6.5 to 7%. Strict control of blood sugar helps in prevention of complication due to diabetes.
- All high-risk patients like Diabetes, Hypertension, Having family history of Kidney disease, those taking pain killers , Age above 50 years must under go annual blood test for serum creatinine and urine test for albumin test evaluation.

What is cadaveric transplantation status in our country?

It is very sad to say that decreased organ transplantation is almost non-existent in our country while Western countries is about 70% of all transplants are (diseased organ) Cadaveric and While it is only 4% of all transplant in India. While In India cadaveric donation rate is only 0.8 per million of population while in western countries is about 35 to 40 per million of population. In fact India has largest number of fatal Road accidents in the world that is more than 1.5 lacs every year , probably There is the big mental block in the family of the cadaveric donors . All collective efforts of physicians, stake holders, social media should be made to improve the donation. Even just 2% of the fatal accident can save large number of transplants recipient patient. In our country in Madras there is Robust Cadaveric transplant programme and it should be replicated in other parts of our country. **Every one should know why to burn the organs after death Rather they all are needed badly to save thousands of lives.**

What your achievement in your medical carrier journey?

I have extensive and promising experience in medical practice for the last 45-year rich experience out of which 32 years in nephrology. During my job, I got opportunities to establish Full fledged Nephrology and transplant Department right from inception at PGIMER and Dr R.M.L Hospital, New Delhi. I also introduced DM Nephrology programme and today I feel proud that my students are heading nephrology unit at various part of country. I also worked as Personal physician of PM of INDIA for about 4 years. I have always been socially devoted to my medical professions and have got the blessing and God and my patients. I have got various fellowship awards and recognitions.

Recently Prof. (Dr) Sham Sunder, has been honoured with prestigious recognition of Lifetime Achievement Award by the Delhi Nephrology Society in April 2025.

