

Kidneys & Kidney Failure 4



Transplantation

This booklet helps you understand the process of transplantation.

It defines the criteria for a donor and the recipient.

It also clearly explains the concepts of 'rejection' and 'immunosuppression'. It also discusses the advantages and disadvantages of transplantation.

Kidney transplantation means implanting a kidney from one person (donor) into the patients (recipient's) body, through a major surgery. After transplant, no dialysis treatment is required. The patient feels better and has more energy to enjoy life. Many restrictions which were imposed during dialysis are withdrawn.

The transplanted kidneys can come from a donor, living or dead (cadaveric donor). Amongst the living donors, the donor can be related to the patient or can be unrelated.

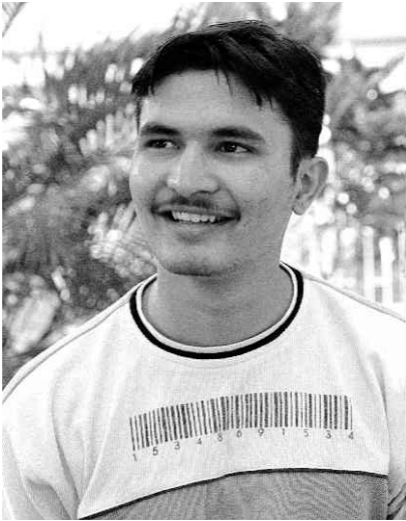
In most of the cases the old diseased kidneys are not removed from the body of the recipient. The new kidney is transplanted in an area which is medically known as the iliac fossa, which is at the waist on the right side. The new kidney is attached to the vein and artery in this area and the ureter is attached to the urinary bladder of the recipient.

Who can donate a kidney ?

People fulfilling the below criteria can donate a kidney.
Healthy adults,

1. Between the age of 18 to 55 years
2. Who do not have kidney related illness
3. Who do not have diabetes, high blood pressure, cardiac problems
4. Who do not have hereditary kidney problems

One kidney can be donated because life can be sustained on one kidney. The donor can live a normal life even with one kidney.



Who Can Receive a Kidney ?

People fulfilling the below criteria can receive a kidney. Below 60 years of age, with

1. No cancer or history of cancer
2. No Hepatitis
3. No cardiac disease
4. No active auto-immune disease (SLE)
5. No untreated urinary reflux or bladder problems
6. No mental illness
7. No infections

(The list is not exhaustive)

Waiting list

After a patient chooses transplantation as an option for treatment of kidney failure, the patient will either have to search a donor on his own or register himself in a waiting list of a transplant institute. Then the patient has to wait till a suitable kidney has been procured for him.

This wait is generally quite long and can take years. Till that time the patient has to continue on dialysis.

What is done before a transplant ?

Blood group matching (ABO matching), Human Lymphocyte Antigen (HLA) typing and matching is done before a donor is decided. Before the transplant, doctors have to ensure that the kidney will not fail or, in other words, will not be rejected by the recipients body.

There are legal formalities to be done before transplantation is done to ensure that the donor is genuine and is donating at his free will and not by force. It is to be ensured that no illegal commercial transaction take place.

How long is the stay in the hospital ?

The recipient may have to stay in the hospital for at least 15-30 days after operation so that the Nephrology team can monitor progress of the transplant and assist the patient is getting well soon and for ensuring that the transplant is working properly.

The donor has to stay in the hospital after the transplant operation for at least a week. This stay is necessary to ensure that the other kidney is functioning properly and the wound of the transplant is healing fast.

Rejection

From the birth of an individual, our body recognizes things in two dimensions : the self and the foreign. If something, which is foreign, enters into our body, body tries to get it out immediately.



When something, foreign enters our blood, our immune system is activated. The only objective of this system is to keep foreign or harmful elements out of our body and keep the body healthy. When this system is activated, the foreign body is engulfed and destroyed inside our body itself.

When a kidney is transplanted into a recipient's body, the recipient's body recognizes it as a foreign material and tries to kill it or destroy it. If this happens, the transplanted kidney will also fail and the patient will have to go back on dialysis or be ready for a new transplant. To not let this happen, two things have to be ensured:

1. The transplanted kidney has to have the best tissue match with the recipient's body (which is ensured by doctors by doing various tests before transplant occurs)
2. The immune system has to be suppressed so that it does not fail the kidney.

The failing of the kidney after transplantation is called Rejection. After rejection occurs, the patient has to go back on dialysis or get ready for next transplant to extend his life.

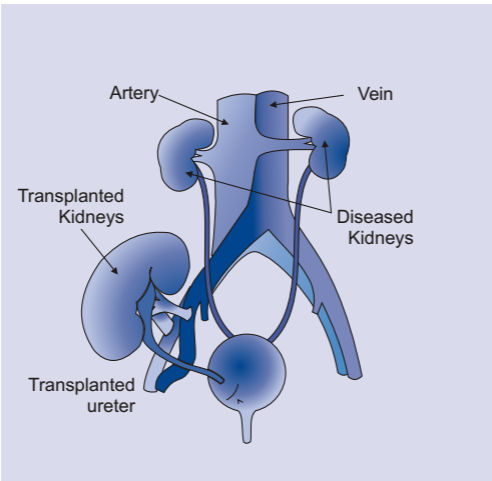
Chances of rejection can be decreased by the following two steps:

1. Proper tissue matching and cross matching prior to transplantation and
2. Appropriate and regular dose of immunosuppressive agents.

Immunosuppression

Immunosuppression is a science whose main aim is to find out medicines or therapies which can suppress the immune system and prevent the rejection of transplanted organs. In the world today, many organs other than the kidneys are transplanted, which are the heart, the lungs, pancreas and the liver.

The agents used for immunosuppression are called immunosuppressants. These can have side effects like changes in the feel of the skin, faster and excessive growth of body hair, weight gain etc. For this reason, the patient has to do regular blood tests after operation, to check whether the balance of medication is correct. Many new drugs are being made available which prevent rejection but do not cause any side effects /cause less side effects.



On the other hand, taking immunosuppressant drugs makes the immune system of the recipient less efficient - not just at rejecting the new kidney-but also at fighting other infections. So that even if kidney rejection does not occur, the patient gets other infections, frequently.

Even after these complications, transplantation is the best option for a kidney failure patient. A transplant patient, if taking good care, can survive for as long as 15-20 years. The patient can lead a normal active life without any problems.

After Transplant, immunosuppressive drugs have to be taken regularly for rest of the life. If a patient becomes careless and irregular in taking these drugs, the chances of rejection increase.

Advantages of Transplantation

1. After transplantation, the patient does not have to undergo dialysis, because the kidneys are back to performing their functions.
2. Many dietary restrictions are withdrawn and person can enjoy life at ease.
3. The patient is not tied to dialysis center or his home for doing dialysis.
4. The patient can travel free of any location constraints, of course, with due care.
5. The patient feels more energetic and sexual life also improves.

The Human Organ Transplantation Act 1994 has simplified the process of organ transplantation in India by defining to a degree, brain death of a person. Now, many more cadaveric transplants are taking place in India than ever before. This has decreased the time a patient has to wait before he gets a transplant. But still, lot remains to be done.

The future of Transplantation

Many new developments are taking place in the area of organ transplantation. Possibilities in the future include the emergence of new therapies that will remove the need for taking immunosuppressive drugs.



Cloning is also fast becoming a reality and cloned kidneys is another possibility we may be looking at. Even in the present scenario, transplantation is becoming simpler and safer day by day.

Keywords

Transplantation, Rejection, Immunosuppressants

Please also refer the following information booklets from **India Renal Foundation** for more information.

1. Choosing Your Treatment
2. Haemodialysis
3. Peritoneal Dialysis
4. Diabetes and Kidney Failure
5. Hypertension and Kidney Failure
6. Kidney Failure and Anemia
7. Kidney stones and Kidney Failure

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