

Kidney Transplantation at AIIMS

The Department of Nephrology along with department of Surgery at AIIMS provides kidney transplantation of patients suffering from End Stage Kidney Disease as per the Certificate of Registration granted by appropriate authorities, since 1972. We follow the Transplantation of Human Organs Rules, 1995 and the subsequent amendments (as and when amended). The procedure for kidney transplantation at AIIMS is as under:

I. Registration of Patient for Transplantation

Patients with kidney disease have to come to the renal clinic, AIIMS, run by the department of Nephrology. Initial evaluation is done to know the cause of kidney disease, its severity, its reversibility (if any) and co-existing conditions (co-morbidities). Subsequently patients are advised renal replacement therapy (RRT) if they have End Stage Kidney Disease (ESKD) i.e. when patient cannot be maintained on medical treatment alone (Chronic Kidney Disease Stage 5). RRT consists of hemodialysis, Chronic Ambulatory Peritoneal Dialysis (CAPD) and/or Kidney transplantation. It is patient and family decision, whether they want life-long dialysis (Either hemodialysis or CAPD) or kidney transplant. Medically, patient is advised kidney transplant ONLY once he/she is fit for transplant. Every patient of ESKD may not be fit for kidney transplant. Some important contraindications for transplantation include:

- 1) Advanced Coronary artery disease or Cerebrovascular disease
- 2) Active infection
- 3) Pre-existing Malignancy

In case of any coexisting conditions, they are treated appropriately before consideration for kidney transplantation. Other investigations needed for transplantation are also carried out. If patient has any other associated illness, then that illness is investigated in detail and appropriately treated on its own merit, before kidney transplant may be possible. Thus, even though patient want kidney transplant and donor is available and tested, there may be waiting for transplant to solve these issues first before kidney transplant is done.

It is important to note that all registration and work-up of patient of kidney transplant is done by the department of nephrology.

II. Donor Registration for Transplantation

Patients of ESKD are counseled to bring donor for registration as per existing laws of the country. After checking blood group compatibility, complete physical examination is done. This is followed by basic laboratory investigations to assess fitness. Subsequently detailed tests to assess kidney function and vascular anatomy are done. All these tests are done in step-wise manner so it takes some time. The patient is included in the waiting list after it is documented that the donor has two normal and equal functioning kidneys and the basic tests are normal. The date of initial registration, when the donor comes with blood group report and found physically fit on initial screening is taken for the purpose of seniority. Donor work-up takes about 4-6 weeks, as the tests are done step by step. To save time, some of the tests, if donor wishes, can be done from other clinics or hospitals. However, certain tests we want to be done in AIIMS only for the want of reliability.

In case a medically fit living donor is not available in the family, the patient's name is registered in the cadaver (deceased) donor kidney transplantation waiting list. Cadaver list contains basic details and contact number of patients. Waiting time and medical fitness are two most important criteria for taking seniority for cadaver transplant. Cadaver transplant is totally uncertain and waiting time for cadaver transplant cannot be predicted for any patient. Once a cadaver donor comes, patients are called as per their seniority and medical fitness. One of the other important criteria is compatibility of blood group of patient and cadaver donor.

III. Who can be Living Donor

By law, grandparents, parents, sibling, children, grandchildren and spouse can be donor and if any one of these are prospective donor, document formalities for kidney transplant are limited. If donor is other than this, whether distant relative or any friend, then there are other formalities for evaluation of donor. One of them is no objection from the state appropriate body to which donor belong. This often takes some time. Further details can be obtained from medical social workers who handled such type of kidney transplant document formalities.

IV. Inclusion in the Dialysis Programme at AIIMS

Since facilities for hemodialysis at AIIMS are limited (AIIMS has 13 dialysis stations), it is not possible to include all patients registered for kidney transplant with us in our hemodialysis programme immediately. A waiting list of all such patients registered for kidney transplantation is maintained accordingly to the date of registration of the living donor. Patients are included in our dialysis program as per their seniority. Currently we are able to include patients in our dialysis programme only 1-2 months prior to expected date of transplantation. Patients in the cadaver donor waiting list have to take dialysis outside this hospital, as their transplant waiting period is unpredictable and AIIMS cannot dialyse patients for indefinite period of time for paucity of facilities.

V. Cost of transplantation:

Cost of transplant is dependent upon many factors and for a particular patient cost can not be confirmed at the beginning. However, there are some components of cost, which are as follows:

Essential Basic costs:

1	Hemodialysis (3/wk) in AIIMS + Medicines Rs.15,000/- approx per month . Depending upon duration of dialysis, total cost for dialysis will vary.	Rs.15,000/- /month
2	Cost of surgical disposable at time of transplantation	Rs.35,000/-
3	Post renal transplantation medicines approx. Rs.15000/- per month for rest of life	Rs.1,5,000/- /month
4	Donor and recipient work-up approx. This cost sometime is much more than this depending upon tests required for immunological testing of recipient for assessing fitness for transplant	Rs.30,000/-

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Note: This does not include the cost of hemodialysis outside, prior to inclusion in the hemodialysis programme at AIIMS.

Additional Cost/s (as needed):

Some patient may require following therapy on medical grounds, which will add to the cost mentioned above:

- Induction therapy with monoclonal antibodies at the time of transplant
- CMV prophylaxis starting after transplant
- Cost of other medication like blood pressure, high cholesterol etc.

Further, depending upon post transplant complications, if any, there may be cost involved for management of these complications, which cannot be predicted at the time of transplant.

VI. Financial Assistance from various government agencies

Poor patients, as per their eligibility may apply for various government sponsored illness assistance funds for which they should contact the hospital social workers.

VII. Blood Requirement

Four to Six units of blood need to be arranged for transplant surgery, though all may not be utilized in every case, four units for patient and two units for donor.

VIII. Waiting period for Living Transplantation

At present AIIMS is doing three-four transplants in a week; and in view of large number of patients registered for renal transplant, current waiting period is 8-10 months approximately.

IX. Procedure for Registration for and Conduct of cadaver transplant in AIIMS:

1. Patients with end-stage kidney disease, who are on regular dialysis (maintenance hemodialysis or chronic peritoneal dialysis) will be registered for cadaver transplant. They must first register in the Renal Clinic, AIIMS.
2. There should not be a medically suitable living donor.
3. Patients on maintenance hemodialysis have to continue taking hemodialysis outside AIIMS as the department does not have facility to provide hemodialysis to such patients.
4. Necessary pre-transplant investigations will be done
5. Patients will be investigated for associated illnesses. If present, associated illnesses needs to be treated appropriately. Patients with untreated associated illness cannot be registered for cadaver transplant.
6. In order to remain in the active cadaver transplant waiting list, the patients must follow-up in the Renal Clinic, AIIMS AT LEAST ONCE EVERY THREE MONTHS, or as and when required on medical ground.
7. Patient must report any new illness to the department in the Renal Clinic, so that illness can be assessed and managed. Otherwise the illness may make patient unfit for renal transplant.

No specific waiting period can be specified for patents in the cadaver transplantation waiting list, since it is totally unpredictable when a cadaver donor may be available.

Procedure of calling patients at the time of availability of cadaver donor

Once there is possibility of cadaver donor, department of nephrology starts contacting patients listed for cadaver renal transplant. For one available kidney, department usually calls five patients. Patients are contacted as per the blood group of potential donor and as per the seniority of patients decided from the date of registration for cadaver renal transplant. Those patients who respond to the telephonic call and are willing for renal transplant are called.

Once 4-5 patients come to hospital within the stipulated time, they are clinically examined for their fitness for renal transplant. Then investigations are sent to assess their fitness based on investigations. In the meantime if patients need pre-operation dialysis, dialysis is started pending investigation to avoid waste of time. Once all investigations are available, fitness of patients is reassessed. Patient who is unfit is sent back. In the meantime, surgical teams also assess patients from the point of view of surgical fitness. The senior most patient who is medically and surgically fit is given the kidney so as to have the best outcome.

It is possible that a person called for cadaver transplant at one time may not be called next time as patients senior to him may be willing to come in emergency next time when cadaver kidney is available. It basically depends upon the fact that on a particular day, which patients responded to the phone calls and was willing to come for emergency cadaver renal transplant.