

AN APPROACH TO ORGAN TRANSPLANTATION

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AIMS OF THIS TALK

1. What actually happens when an organ is donated for transplantation?
2. Different type of donors
3. Where is a kidney implanted during transplantation?
4. What are the eligibility criteria for transplantation?

Why transplant patients?

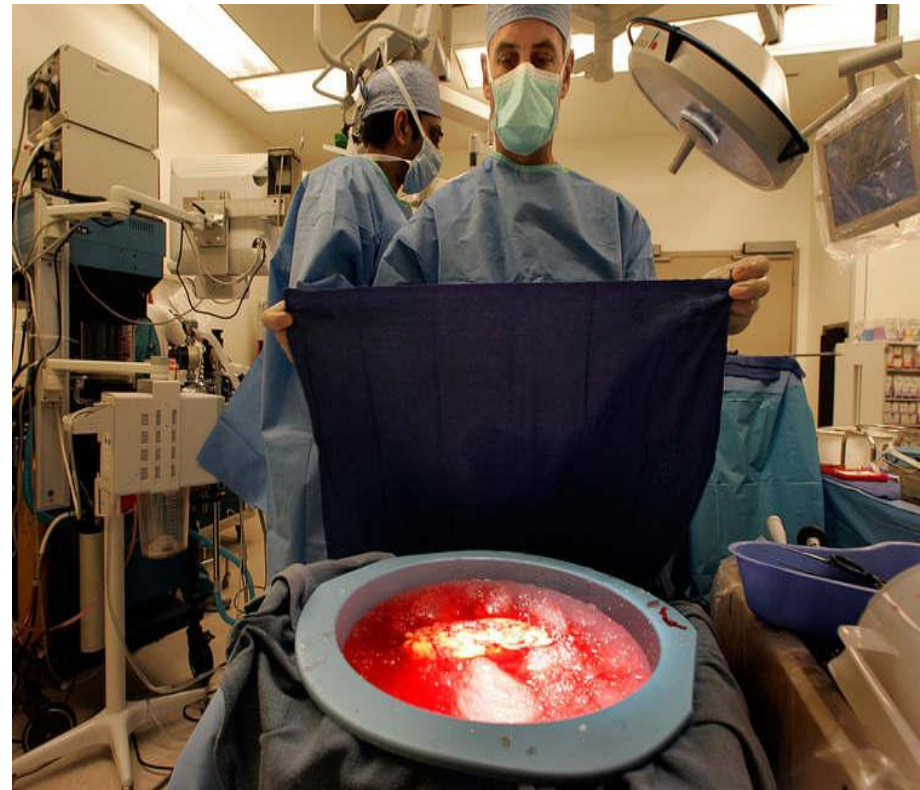
- Long term survival benefit when compared with dialysis
- Quality of life
- Cost-effective (after first year of transplant)

BUT

- Transplant is not the end of the road
 - Immunosuppressant medication for life
 - Pre-existing disease may recur (e.g. IgA nephropathy)
 - Grafts may not survive (rejection, side-effects)
 - Co-morbidity with transplant medication
 - Post transplant diabetes mellitus
 - Atherosclerosis – increased cardiovascular risk
 - Malignancies

What happens when there is a cadaver donor?

- Transplant coordinator (for procurement) is notified
- Potential donor is assessed for suitability
- If suitable, the family is approached regarding donation
- If family agree, brain death is confirmed
- Surgical teams notified for the harvest – depending upon what organs are suitable
- Organs are harvested, individually stored in preservation solution
- Organs are then transferred, on ice, to various units for implantation



What happens when there is a recipient call up?

- Transplant coordinator (for recipients) is notified that an organ is available
- Patients on the top of the waiting list are screened telephonically and with the attending doctor (i.e.. are they well and available for transplant?)
- Blood from donor + recipient is cross-matched. If compatible, the most suitable patient is notified
- On admission, CXR, ECG, blood tests done Attending doctor and anesthetist assess the patient
- Immunosuppression is given prior to implantation of the organ

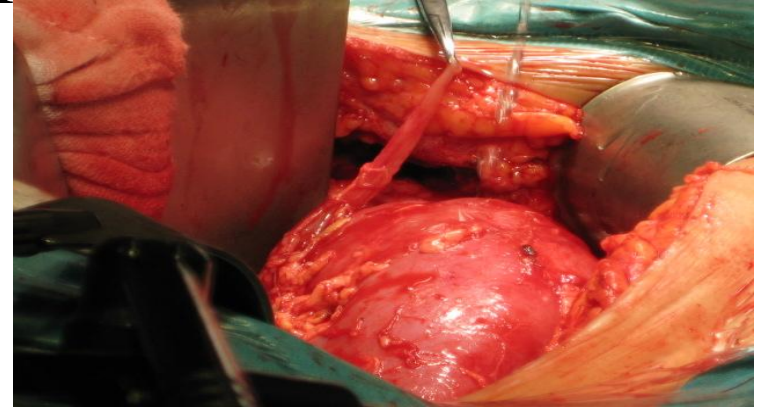


Types of Kidney Transplant

1. Living Kidney Transplant

Related donor

Non-related donor



2. Cadaver Kidney Transplant



**Pancreas after kidney or
Simultaneous kidney pancreas
transplant (Diabetes Mellitus)**

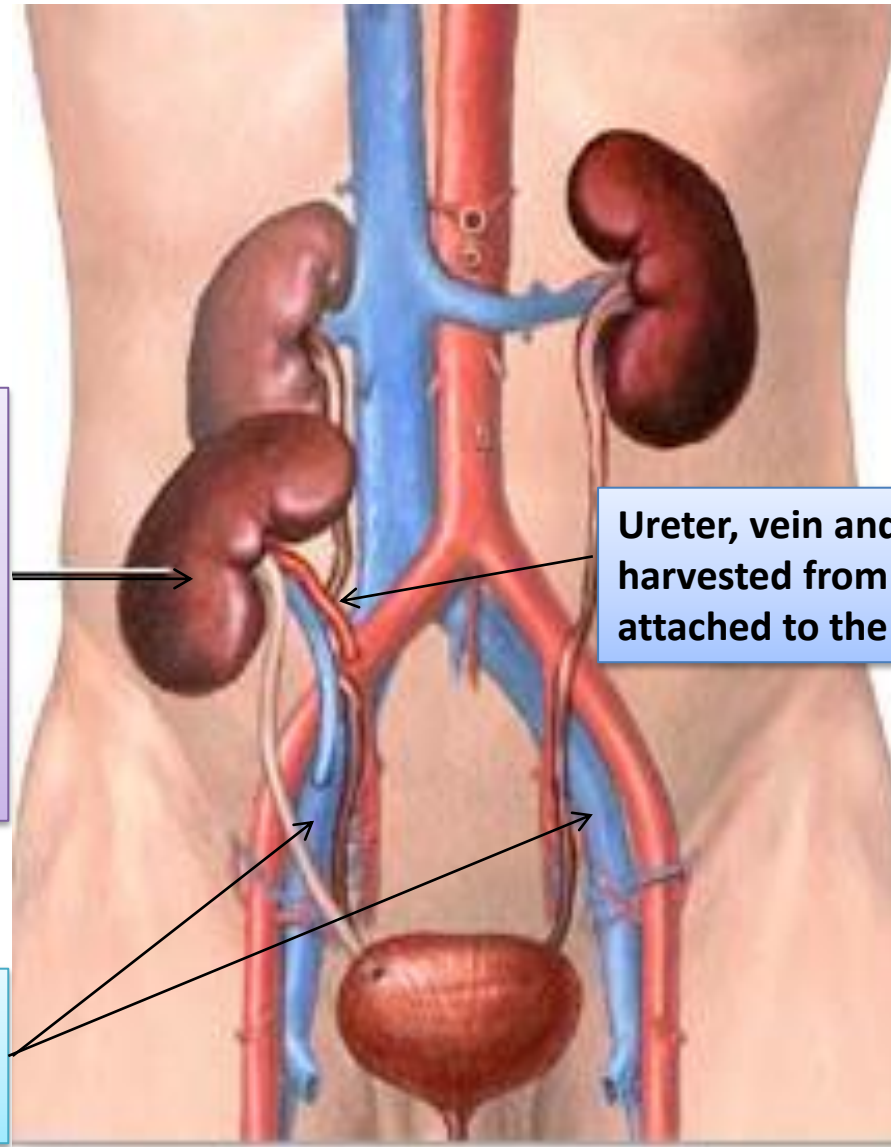




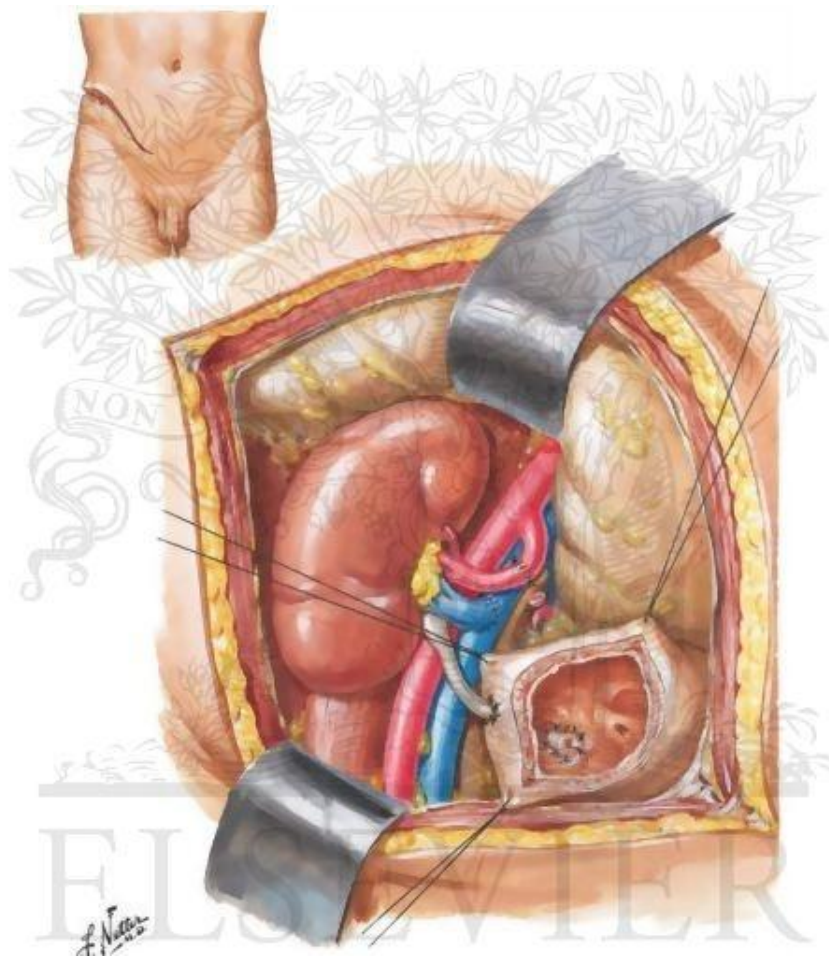
What happens in theatre?

Transplanted kidney is on left or right – surgeon dependant. Patients own kidneys are not removed at the time of surgery – may be removed before the transplant e.g. big polycystic kidneys. If previous failed transplant, the old transplant kidney stays in the patient and the new one goes on the other side

Preserve the femoral and iliac veins as much as possible: AVOID GROIN LINES



Ureter, vein and artery are harvested from the donor and attached to the recipient



After surgery.....

- Ensure no surgical complications
- Optimize immunosuppression
- Ensure new kidney is working
- Prevent rejection
- Patient education and support
 - Medication, compliance, FOLLOW UP
 - Living a new life to the full
 - Re-integrating into family and work environments as a HEALTHY person

How do we get there.....

- **Patient has to be eligible for transplantation**
 - Public Sector: chronic dialysis only offered if eligible for transplantation
 - Private Sector: chronic dialysis offered to all who need it (and can afford it). *NOT all patients may be eligible for transplantation*

Balance RISK vs. BENEFIT for the individual patient
vs.

Extremely limited RESOURCES

Bottom line:

THE PATIENT MUST HAVE A GOOD CHANCE
OF A LONG LIFE AFTER TRANSPLANTATION

Who cannot be transplanted?

- Elderly (>70years old, BUT assess each case individually)
- Patients with malignancies – need 5 years disease-free after treatment
- Patients with active psychiatric disease, in particular, psychotic diseases
- Any chronically debilitated patient with incapacity to mobilise or perform activities of daily living
- Active addiction
- Chronic infections:
 - chronic active hepatitis C or B (untreated) or complicated by cirrhosis of the liver
 - Untreated HIV; HIV with opportunistic infection

Who cannot be transplanted?

- Patients with comorbid disease with a poor prognosis
 - advanced COPD/other chronic lung disease
 - dilated cardiomyopathy
 - ischaemic heart disease
 - advanced valvular heart disease
 - severe vascular disease (prior CVA, peripheral vascular disease)
 - complicated diabetics: vascular disease (CVA/IHD)
 - Liver cirrhosis
 - BMI >35
 - *Active* auto-immune disease (e.g. SLE)

Who cannot be transplanted?

- ANYONE WHO CANNOT BE COMPLIANT - **Transplant outcome is determined by the patient's compliance**
- Transplant must be an acceptable mode of treatment for the patient
- The patient must be ABLE to comply:
 - intellectually (parents with children)
 - Psychologically (psychosis, depression)
 - Socially (fringe groups, religious sects)
 - Financially (assistance long term)

Does the dialysis modality affect transplantability?

(Hemodialysis vs. Peritoneal dialysis)

- The modality does NOT affect transplantability
- **but**
- Repeated complicated femoral access may impact on patients transplantability – preserve the femoral/iliac vessels
- Repeated blood transfusions may pre-sensitise a patient
- Repeated infections (line sepsis/peritonitis in CAPD) may prevent transplant if they are ill at the time of organ availability

If there is a living donor.....

- **Types of living donors:**

1. Living related: e.g. mother to child; brother to sister
2. Living unrelated: e.g. husband to wife; from a friend
3. Altruistic donor

- **Related donors:** no approval from DOH required

- **Unrelated and altruistic donors:**

- approval from DOH required – may take up to 6 months

- **Non SA citizens**

- Cannot be accommodated on the SA list
- May have living donor transplant performed in SA (in private sector)
- Living donors: (related or unrelated) have to be approved by DOH
- Ethics – follow up after they return to home country; cost

If there is a living donor.....

- Refer to transplant co-ordinator for further management
- Donor must be carefully assessed
 - DO NO HARM (their health must not be compromised in any way, as far as possible, through the donation)
- If eligible and the donor is accepted for living donation:
 - Donor and Recipient are operated in 2 adjacent theatres simultaneously
 - Donor kidney:
 - Can be retrieved by laparoscopic procedure
 - Small scar, less pain, short post recovery time
 - Can be retrieved by conventional surgery
 - Big scar, more pain, longer recovery time

- Questions....

South African Organ Donor Foundation

www.odf.org.za

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