# **Kidney** Transplantation **from** Living **Related and** Living **Unrelated** Donors

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Kidney transplantation has become a highly accepted and successful therapy for chronic renal failure patients. It is generally agreed that living related donor kidney transplantation is the first choice for its high success rate, with cadaver donor taking second place. In this follow up study we analyzed the incidence of complications and clinical results of 54 renal transplants. We divided the patients into two groups. Group one consists of 16 patients who received their grafts from living related donors (LRD) at different centers (Damascus, Ankara, London, …etc.). Group two consists of 38 patients who received their grafts from living Unrelated donors (LUD) in India when those patients returned from the transplant center they received their care at the department of nephrology at Aleppo University Hospital (AUH). Many complications were recorded including acute & chronic rejections, infections, hypertension or any other complications. From our follow- up results it could be seen that kidney transplantation from living related donors is much more favorable either in respect to overall time of survival and morbidity. 1, 3, 4

## Patients and Methods

From our haemodialysis center at AUH, between 1977 to 1994 more than 150 patients with ESRD went to other centers for renal transplantation from LRD & LUD. Although we have not started kidney transplantation in our hospital, when the majority of those patients arrived after having the transplant at center they reported to our nephrology department at AUH where a complete medical and laboratory check-up had been done. This study describes the incidence of complications and clinical results of 54 renal transplants. For comparison we divided the patients into two groups. Group one includes 16 patients who received their grafts from LRD at different centers (Damascus, Ankara, London, Germany …), between June 1982 & Jan 1994. They were 10 males & 6 females aged between 19 to 54 years.

9 patients were immunosuppressed with immuran and prednisolon and 7 patients with an immuran, prednisolon & cyclosporine. All complications were recorded.

Group two includes 38 patients who received their grafts from LUD in India, between March 1988 and Jan 1994. Ages between 15 to 64 (22 males & 16 females). All patients were immunosuppressed with prednisolon, immuran & cyclosporine.

Table (1) shows the causes of renal failure in both groups.

Table (2) shows age and sex distribution in all patients.

## Results:

In group one (LRD) 1 patient died after 9 years of transplantation. Major medical complications had been observed in this group were, acute rejection in 2 patients (12-5%) chronic rejection in 1 patient (6.3%), Hypertension in 8 patients (50%), urinary tract infection in 7 patients (43.75%), chest infection in 1 patient (6.3%), diabetes in 1 patient (6.3%). Other complications are shown in table (5). The acturial patients survival at 2 years was 100%.

In group two (LURD) 11 patients died during the follow-up period (6 females & 5 males). Within the first 6 month of transplantation four of them died and the rest died between 10 and 27 months, three grafts were lost. Major medical complications were observed in this group acute rejection in 4 patients (10.5%), chronic rejection in 6 patients (15.7%). and hypertension in 22 patients (57.9%), UTI in 17 patients (44.7%), and chest infection in 3 patients (7.9%), diabetes in 7 patients (18.4%), Cushing in 8 patients (21.9%), and cataract in 2 patients (5%), malignancy in 1 patient (2.6%). The acturial patients survival at 2 years was 71.1%.

Table (2) shows causes of death in both groups. Table (3) shows cardiovascular complications. Table (4) shows infectious complications.

All other complications for patients are shown in table (5).

| | Group 1 | | Group 2 | |
|---|---|---|---|---|
| Glomerulonephritis | 6 | 37.5% | 12 | 31.5% |
| Pyelonephritis | - | - | 6 | 15.8% |
| Diabetes | - | - | 1 | 2.6% |
| Hypertension | 1 | 6.3% | 1 | 2.6% |
| Obstruction | - | - | 2 | 5.3% |
| Polycystic | - | - | 1 | 2.6% |
| Postpartum | - | - | 1 | 2.6% |
| Amyloidosis | 1 | 6.3% | - | - |
| Unknown | 8 | 50% | 14 | 36.8% |

***Table 1*** *- causes of CRF in both groups*

| | LURD Number | LURD % | LRD Number % | LRD |
|---|---|---|---|---|
| Infections: | 7 | 18.4% | - | - |
| a-Septicemia | 3 | 7.9% | - | - |
| b-Pulmonary infections | 3 | 7.9% | - | - |
| c-Viearemia | 1 | 2.6% | - | - |
| Chronic rejection | 1 | 2.6% | - | - |
| Acute rejection | 1 | 2.6% | - | - |
| Cardiovascular | 1 | 2.6% | - | - |
| Gastrointestinal bleeding | - | - | 1 | 6.3% |
| Hepatitis | 1 | 2.6% | - | - |

***Table 2*** *- causes of death in both groups*

| | LURD Number | LURD % | LRD Number % | LRD |
|---|---|---|---|---|
| Hypertension: | 22 | 57.9% | 8 | 50% |
| Congestive heart failure: | 3 | 7.9% | 2 | 12.5% |
| Arrhythmias: | - | - | 1 | % |

***Table 3*** *- cardiovascular complications*

| | LURD Number | LURD % | LRD Number % | LRD |
|---|---|---|---|---|
| Urinary tract infection: | 17 | 44.7% | 7 | 43.75% |
| Pulmonary infection: | 3 | 7.9% | 1 | 6.5% |
| Septicemia: | 3 | 7.9% | - | - |
| Viearemia: | 1 | 2.6% | - | - |

***Table 4*** *- infectious complications*

## Discussion

Renal transplantation from living related donors is still preferred therapy for patients with ESRF.

(6) It is a fact that kidney transplantation from LRD has a better outcome than that of cadaver's kidney or from unrelated paid donors supplied by few private hospitals in India (1.3). From the above comparison it was clear that the overall time of survival was much longer and the incidence of hypertension was lower in group one (LRD), despite the long term follow-up in this group, septicemia and viraemia was absent in this group while it was the major cause of death in group two. This unfavorable outcome of purchased kidney transplantation was reported by many authors (1, 2, 35).

From this observation, paid organ donation in all its forms sacrifices medical, moral and ethical values and live URD in India still unacceptable ethically and carries an unacceptable number of serious complications such as HTV infection, malaria, TB, hepatitis. (1, 2, 3, 5).

We still discourage patients to go to India for a transplant. On the other hand we should convince patients relatives that donation of their kidney, if they are suitable donors, is a safe procedure and is the best therapy for ESR patients.

| | LURD Number | LURD % | LRD Number % | LRD |
|---|---|---|---|---|
| Polycythemia : | 2 | 5.2% | 2 | 12.5% |
| Low platelets count: | 2 | 5.2% | 1 | 6.3% |
| Hyperuricaemia: | 3 | 7.9% | 5 | 31.3% |
| Low WBCs: | 1 | 2.6% | - | - |
| Chronic rejection: | 6 | 15.7% | 1 | 6.3% |
| Acute rejection: | 4 | 10.5% | 2 | 12.5% |
| Diabetes: | 7 | 18.4% | 1 | 6.3% |
| Cushing's: | 8 | 21.1% | 1 | 6.3% |
| Acne: | 18 | 47.4% | 8 | 50% |
| Cataract: | 2 | 5.2% | 1 | 6.3% |
| Osteoporosis: | 2 | 5.2% | 3 | 18.7% |
| Delayed wound healing: | 3 | 7.9% | 2 | 12.5% |
| Malignancis: | 1 | 2.6% | - | - |
| Hydrocele: | 2 | 5.3% | 1 | 6.3% |
| Recurrent fever: | 1 | 2.6% | - | - |
| Acute pancritities: | 1 | 2.6% | - | - |
| Cylosporine toxicity: | 3 | 7.4% | - | - |

***Table 5*** *- other complications*

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