



ORIGINAL RESEARCH PAPER

Urology

LONG TERM QUALITY OF LIFE OF LIVING KIDNEY DONORS: A SINGLE CENTRE EXPERIENCE

KEY WORDS: transplant, kidney donor, quality of life, sustainable

Surag K R*	Mch Urology (Assistant Professor) *Corresponding Author
Sanjay R P	Mch Urology (Associate Professor)
Srinivas J	Mch Urology (Professor)

ABSTRACT

Introduction- The prevalence of ESRD is increasing in India. Renal transplantation is known treatment for ESRD which improves QOL of patients. Number of LKD is vastly inadequate to meet the ever increasing requirement. Understanding psychosocial outcomes is very essential along with risk related to kidney health and surgical/ anesthetic complications. There is lack of data regarding QOL of live donors post LKD in India. **Materials and methods:** Cross sectional cohort study of donors from January 2009 - February 2020. Age, sex and the relation to recipient were collected from Medical Record Department. Live donors underwent QOL assessment using SF-36 questionnaire during OPD visit. It further summarized into the physical component score (PCS) and the mental component score (MCS) and compared with general Indian population. Statistical analysis was performed. **Results:** 74 patient came for follow up and filled SF -36 questionnaire. 26 were male and 48 were female. Donor age ranged from 24 to 70 years. The mean calculated Physical Component Score (PCS) is 72.6 and Mental Component Score is (MCS) 71.4. **Conclusion:** Live donors are physically and mentally as healthy as general population. Ppsychosocial preparation, detailed discussion of possible complications and financial commitments will reduce the negative outcomes and promote live kidney donations

INTRODUCTION

Renal transplantation for ESRD is a well established treatment modality with improved Quality of Life (QOL), survival and reduced healthcare cost^{1,2}. The prevalence of ESRD in India is approximately 151- 231 per million population³. Currently around 7500 Renal transplantations per year are performed at 250 Renal transplant centers in India⁴. Number of LKD is vastly inadequate to meet the ever increasing requirement. Understanding psychosocial outcomes is very essential along with risk related to kidney health and surgical/ anesthetic complications. Previous studies have reported that the majority of donors experience an improvement or no change; minority have reported adverse outcomes such as depression and anxiety.^{2,5,6} There is lack of data regarding QOL of live donors post LKD in India. Hence the present study was undertaken

Methodology:

Cross sectional Cohort study of live donors from January 2009 - February 2020. Age, sex and the relation to recipient were collected from Medical Record Department. Live donors underwent QOL assessment using SF-36 questionnaire during OPD visit. It further summarized into the physical component score (PCS) and the mental component score (MCS) and compared with general Indian population. Statistical analysis was performed using SPSS version 21.

Anova was used to find the significance. Level of significance was set at 0.05 General health (2 items), Physical functioning (10 items), Physical health problems (4 items), Emotional health problems (3 items), Social functioning (2 items), Bodily pain (2 items), Energy/vitality (4 items), Mental health (5 items), General health perceptions (4 items).

RESULTS:

Total live donations in our institute was 151 from Jan 2009- Feb 2020 out of which we were able to contact = 104 donors and 74 patient came for follow up and filled SF -36 questionnaire. 26 were male and 48 were female. Donor age ranged from 24 to 70 years (mean age 52.1 +/- 8.2). 44 of donors were mothers, 20 were fathers, 4 were wives, 2 were husband, 4 were siblings.

Operative characteristics		
Nephrectomy side	Left - 65	Right - 9
Mean operative time	2 hours 45 mins	Range (55mins - 4 hrs, 5 mins)

Mean operative blood loss	140 +/- 60ml	Range (50ml - 300ml)
Mean duration of hospital stay Range	7.1 +/- 2 days	(5 - 12 days)

10 of them reported complications with donor operation. Wound hematoma or seroma occurred in 7 patients that didn't require any treatment. Superficial wound infection occurred in 3 patients.

Results of SF 36 scores:

	Physi cal functi oning	Physi cal role limita tion	Bodi ly pain	Gener al health	Energ y/Vita lity	Social functi oning	Emoti onal role limita tion	Mental health
Our donor s	74.9 +/- 11.4	78.9+ /-26.5	72.9 +/- 18.1	72.2+ /-19.0	69.2+ /-20.6	73.1+ /-16.3	75.4+ /-27.3	73.1+ /-15.7
Indian popul ation*	75.29	78.59	73.8 0	73.30	70.53	75.07	78.28	78.11

The mean calculated Physical Component Score (PCS) is 72.6 and Mental Component Score is (MCS) 71.4. On asking donors whether they were willing to donate their kidney given another chance? 96% donors would undergo donation again. 4% donors were under impression that donating had negative impact on their health.

DISCUSSION:

Our study shows that LKD doesn't decrease QOL for live donors which are consistent with previous literature. Similar outcomes have been noted in other studies with improved self esteem, higher QOL and physical growth post organ donation.⁶⁻¹⁰ Reasons were 1. Donors are the healthiest - that pre donation screening process selects the healthiest persons from the general population and eliminate the people with pre existing kidney disease, heart disease, cancer, overt diabetes, uncontrolled hypertension. 2. On post donation it ensured physical visits of live donors and facilitated additional preventive medical care by following healthy diet and exercise 3. Minimal surgical complication - In order to pursue and promote live donor nephrectomy it is important to identify the surgical risk associated with donor nephrectomy. Avoiding consequences such as surgical mortality and morbidity was one of the major factor to the

donors in many studies. In our study there were nil major complications and only 10 had minor complications. Finance - Another major factor was financial burden. Few studies found that some donors required financial assistance and other participants ranked financial concerns highly. Since ours is a govt run institute the cost is highly subsidized to the patient.

Limitation:

Ours was a single centre study and the number of participants were limited. A multi centre, cohort review is essential to boost our findings.

CONCLUSION:

The present study indicates that live donors are physically and mentally as healthy as general population. As the kidney donation is a major decision, psychosocial preparation, detailed discussion of possible complications and financial commitments may further reduce the negative outcomes and promote live kidney donations.

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