

Living unrelated kidney donor transplantation in Iran

**Ali Nobakht Haghighi
Nasrollah Ghahramani**

Abstract

In the September and November 2006 issues of *Nature Clinical Practice Nephrology*, two articles regarding living unrelated kidney donor transplantation alluded to the practices in Iran. Having served in the planning, supervision and implementation of various aspects of health care in Iran, including organ transplantation (ANH), and as transplant nephrologists who have actively participated in the care of transplanted patients in Iran (ANH and NG), we feel obligated to elucidate the realities surrounding organ transplantation in Iran. So that unbiased researchers are provided with information to judge for themselves.

Key Words: Kidney transplantation, Iran Living Donor

Introduction

Renal replacement therapy, in the form of hemodialysis, was initiated in Iran in 1965, and because of limitations on resources, patients over the age of 55 were excluded from treatment. The first kidney transplantation was carried out at Shiraz University in 1967 and while 114 kidney transplantations (living and deceased donor) had been performed prior to the 1979 revolution, no specific legislation regarding organ transplantation existed at that time.

Following the 1979 revolution, because of problems inherent in the collapse of a political, administrative and economical system, and because of sanctions and embargoes imposed on Iran, as well as the Iran–Iraq war, acquiring supplies and equipment for dialysis became increasingly difficult. At the same time, in accordance with the goal of providing health care to all Iranians requiring dialysis, the age limit was lifted. Considering the increasing prevalence of chronic kidney disease among the elderly, particularly among patients with diabetes and hypertension, the total number of patients on renal replacement therapy continued to increase. Maintenance hemodialysis treatment was initiated in an increasing number of patients with baseline cardiovascular co-morbidity, translating into an increased mortality among dialysis patients. In view of this reality and because of inaccessibility to deceased donors, clinicians, academicians and planners felt the need to initiate living related donor transplantations. Within a short period of time, the waiting list for organ transplantation expanded.⁴ In order to relieve the shortage, the decision was made to proceed with living unrelated donor transplantation in a lawful and transparent manner, with full government scrutiny and a strict and clear protocol that will be delineated over the next few paragraphs.

From a historical and sociological perspective, it is noteworthy that all this was happening at a time when Iran was involved in a devastating war and groups of Iranians were volunteering en masse to sacrifice their lives for their beliefs and goals. This mentality of sacrifice carried over to the willingness to donate an organ, altruistically, in order to save the life of a fellow human

being. Having witnessed the genuine feelings firsthand, we feel it is unfortunate that some of our learned colleagues and respected researchers use the terminology "sale of kidneys" instead of "donation of kidneys". In our view, they have preferred to view the glass as half empty, rather than half full.

Responsible members of the medical care establishment, the Iranian Society of Nephrology and Organ Transplantation and physicians have been proactive in avoiding the unethical practices prevalent in some countries, which have raised concern around the world. They have emphasized and diligently maintained the highest ethical principles in organ transplantation practices by implementing the following protocol:

1. For living donor transplantation:

- In an effort to eliminate "brokers" and "middlemen", the Dialysis and Transplant Patients Association (DATPA; an official non-profit organization, equivalent to the National Kidney Foundation) scrutinizes the process of organ donation. Members of this foundation are patients with kidney failure who volunteer their time, receiving no financial benefits. They ensure that all regulations are followed.
- Members of the transplantation team have no role in identifying potential donors.
- The central government and non-profit/charitable organizations have combined their efforts and resources to acknowledge the altruism of the donors. This takes the form of a monetary gift as a "token of appreciation", automatic provision of free life-long health insurance and the

opportunity to attend the annual appreciation event dedicated to donors.

- Transplantation from Iranian donors to non-Iranians is banned.
- Transplantation from immigrant donors to Iranians is likewise banned.
- Prior to transplantation, the donor is examined by a nephrologist and fully assessed by the transplantation team, to assure safety of donation. In the event that the team feels donation might harm the donor, donation will be cancelled.
- In order to minimize donor morbidity, laparoscopic nephrectomy is promoted.
- For the last two years, a national task force has been studying the outcome of living kidney donors with the goal of establishing a specific 'Donor Support Network'. The report of the task force will be published shortly.

2. For deceased donor transplantation:

Although the religious sanction for use of cadaveric organs in an effort to save the life of a fellow human being had previously been issued by religious leaders, the actual law permitting cadaveric organ transplantation was not ratified by the legislature until 2002. The new legislation has promoted the performance of numerous deceased-donor organ transplantations, involving kidney, liver, heart and lungs.

There is a concerted effort to expand the cadaveric transplantation program, as well as hemodialysis and peritoneal dialysis units. Fortunately, all these services are provided free of charge to patients. Candidates for kidney transplantation are expeditiously transplanted after their assessment and paraclinical

workup. The living unrelated donor transplantation program operates under the close supervision and scrutiny of the Ministry of Health and Medical Education, The Iranian Scientific Society of Organ Transplantation, the Foundation for Patients with Special Diseases, and DATPA. This strict scrutiny, along with the universal availability of transplantation, avoids exploitation, minimizing any chance of unethical conduct.

Thus far, over 19,000 kidney transplantations have been performed in Iran, and excellent results of living donor transplantation have been reported by several Iranian researchers in reputable medical journals. Furthermore, we feel it is very important that the Iranian medical community has not been indifferent to the health of the donors, maintaining a vigilant interest in donor outcomes.

Several studies have addressed the concerns regarding exploitation of the poor and the illiterate in the donation process. A study of 478 living unrelated donors enrolled from 30 transplant centers confirms that the donation process is broker-free, with 96% of the donors having been referred by DATPA. This study also found that 91% of the donors expressed satisfaction with their donation and 53% suggested kidney donation to others. Sixty-three percent of the donors noted that the reward they received for donation had a moderate positive effect on their economic status, mostly through helping with their debts. A large proportion of the donors (90.8%) had at least a high school education, and 6.5% had university education. This is also confirmed by other studies which have, in addition, shown that donors are similar to their recipients in terms of socioeconomic and education level.

In conclusion, it is our belief that because of the multitude of unique and critical issues surrounding organ transplantation, there is always a valid concern about misconduct and unethical practice. This is true for all countries, including the US, which is certainly not immune from unethical acts involving organ brokers, as evidenced by reports in the American press. In certain developing countries, much of the exploitation and unscrupulous acts result from poverty and financial need. In those situations, the physicians and patients are not to be blamed. Rather, the fault lies with the lack of an infrastructure for supervision of living unrelated organ donation. We propose that the Iranian model, with support from governmental and non-profit organizations, is an efficient and ethical model that can be employed not only by developing nations, but also by some developed nations, which currently lack the necessary regulatory supervision.

References

1. Jha V and Chugh KS (2006) the case against a regulated system of living kidney sales Nat Clin Pract Nephrol 2: 466-467.
2. Daar AS (2006) the case for a regulated system of living kidney sales. Nat Clin Pract Nephrol 2: 600-601.
3. Nobakht-Haghighi a *et al.* (2002) the epidemiology of end-stage renal disease in Iran in an international perspective. Nephrol Dial Transplant 17: 28-32.
4. Fazel I (1995) renal transplantation from living related and unrelated donors. Transplant Proc 27: 2586-2587.
5. Broumand B (2003) Progress of nephrology in Iran. Proceedings of ISN COMGAN conference, World Congress Nephrology: 2003 June 7; Berlin.
6. Ghods AJ (2002) renal transplantation in Iran. Nephrol Dial Transplant 17: 222–228.
7. Malek Hosseini SA *et al.* (1995) Report of the first liver transplants in Iran. Transplant Proc 27: 2618.
8. Simforoosh N *et al.* (2006) Living unrelated versus living related kidney transplantation: 20 years' experience with 2155 cases. Transplant Proc 38: 422–425.
9. Broumand B (2005) Transplantation activities in Iran. Exp Clin Transplant 3: 333–337.
10. Khosroshahi HT *et al.* (2003) Three hundred one cases of renal transplantation from Tabriz, Iran. Transplant Proc 35: 2594–2595.
11. Porooshani A *et al.* (2001) Results of 1020 renal transplants single-center experience. Transplant Proc 33: 2644–2645.

12. Salahi H *et al.* (2001) Effect of donor nephrectomy on renal function and blood pressure. *Transplant Proc* 33: 2654.
13. Ghahramani N *et al.* (1999) Occurrence of hypertension and proteinuria among kidney donors in Shiraz Nemazee Hospital. *Transplant Proc* 31: 3139.
14. Broumand B (1997) Living donors: the Iran experience. *Nephrol Dial Transplant* 12: 1830–1831.
15. Malakoutian T *et al.* (2006) Socioeconomic Status of Iranian Living Unrelated Kidney Donors: A Multicentric Study. Presented at the 10th Congress of Middle East Society for Organ Transplantation: 2006 November 26–29, Kuwait.
16. Ghods AJ *et al.* (2001) Comparison of some socioeconomic characteristics of donors and recipients in a controlled living unrelated donor renal transplantation program. *Transplant Proc* 33: 2626–2627.
17. Ghods AJ and Savaj S (2006) Iranian Model of Paid and Regulated Living-Unrelated Kidney donation. *Clin J Am Soc Nephrol* 1: 1136–1145.