

Transplant Tourism in Israel: Effect on Transplant Practice and Organ Donation

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The shortage of organs for transplant has been a worldwide phenomenon, and many countries are making efforts to increase the number of organs for transplant by using expanded criteria donors, promoting living donation and improving the deceased donation rate. With global investments and the development of advanced medical services in developing countries, transplant tourism – in which patients travel abroad to undergo transplant in countries that permit buying and selling of organs for transplant -- has evolved as an easy, accessible and low cost alternative to languishing on a long waiting list at home. This is particularly true in the case of living paid donation as an organ source for kidney transplantation. While in the past only a small number of patients in developed countries could afford the out-of-pocket costs of transplantation abroad, and many were reluctant to risk undergoing surgery in developing countries, today health insurance agencies offer full coverage of the transplant procedure in well equipped high-level medical centers in countries such as the Philippines and Colombia.

What is the effect of transplant tourism on the current practice of transplantation in developed countries? Does a patient's motivation to live justify the legitimization of paid donation transplantation in other parts of the world? In the following paragraphs I will try to answer these questions based on almost 10 years' experience with transplant tourism by Israeli patients.

Brain death has been legally accepted in Israel since the early 1970's, and transplantation of kidneys, livers, hearts and lungs is successfully practiced. Israel's organ donation rate, however, remains one of the lowest in the Western world, averaging 9 donors per million population per year. The consent rate in Israel is 40%; the number of deceased

donors averages 60-70 donors per year. Cultural resistance to donation and objections of orthodox rabbinical leaders to the brain death concept are probably responsible for the failure of efforts to increase the donation rate.

As of June 2007, almost 850 patients were listed for transplant at the Israel Transplant Centre (500 were waiting for kidneys). In 2006, only 150 patients underwent deceased or living donor transplantation in Israel. With that low number of transplants, one would expect high mortality on the waiting list. In 1994, however, the Ministry of Health began to allow medical insurers to reimburse for life-saving transplants performed abroad; since 2001, kidney transplants performed outside of Israel have also been defined as life-saving and are reimbursed. This practice has promoted transplant tourism. Currently, more than 150 Israelis receive kidney transplants abroad each year (Table 1). In more than 50% of these cases, the patients are referred for transplant before even going on dialysis.

Transplant tourism has been promoted not only to provide an alternate route for organ transplantation but also because of economic considerations. The Ministry of Health saves the expense of dialysis in Israel, and health insurers are able to sell high-priced policies that cover transplants performed abroad. Almost 70% of Israelis pay the additional fee to buy such policies, and some also carry additional private “transplant insurance” policies.

Transplant tourism in Israel burgeoned in the late 90’s when Israeli patients who could afford to pay for kidney transplantation travelled abroad to different locations, depending on their budget and on the ease with which they could access paid living donation in countries that did not impose legal barriers to organ trade (in particular, Moldavia, Ukraine, Turkey, Bulgaria, South Africa and India). The cost of transplantation varied according to supply-and-demand market rules and the number of brokers in between. Escort by a transplant professional to and from South Africa could bring the price as high as \$250,000. The donors were either local residents or Israelis. For Israeli donors, pre-donation

screening (including cross-match) was performed in Israel, and both the patient and the donor travelled together to the transplant destination abroad. According to a variety of informal sources, the fee paid to an Israeli donor averaged between \$10,000-\$15,000.

With time, international scandals resulted in the closure of several transplant destinations, but other sites were opened, including Columbia, China and the Philippines.

With the 2001 Ministry of Health regulation permitting reimbursement for kidney transplants performed abroad, the costs decreased substantially, and the field was opened to competition between many brokers serving as informal agents for the health insurers. Local Israeli physicians with minimal knowledge of transplantation medicine became involved in the transplant trade, acting as medical advisors and advocating transplant abroad for their patients. Competition led brokers to be non-selective, referring older patients with cardiovascular risks and highly sensitized patients, often to hospitals without any appropriate infrastructure to care for these patients. While some of the foreign transplant centers provided high quality care and other centers seemed to improve over time, in general, when complications arose, the patients were often forced to return to Israel and upon arrival were transferred immediately to the emergency room. In other cases, patients presented to Israeli transplant centers with severe rejection, infection or technical complications, but the Israeli transplant team had minimal if any information about the transplant procedure itself and no information whatsoever on the donor.

Transplant tourism has markedly affected transplantation practice and organ donation in Israel. An analysis of waiting time and mortality among patients placed on the kidney transplant waiting list at the Rabin Medical Center, one of the largest transplant centers in Israel, between 2001-2005 shows that the annual rate of transplants of newly listed candidates more than doubled, from 13.6% in 2001 to 30% in 2005, mainly because of the growth in the number of patients transplanted abroad (Table 2) (unpublished data). In the same time period,

the mean waiting time for kidney transplantation in Israel has fallen from 705 to 509 days. The death rate for newly listed patients has remained low at a mean of 3% per year. Indeed, there is no doubt that transplant tourism has significantly increased the number of kidney transplants and well served the patients waiting for them.

But what about the effect of transplant tourism on candidates waiting for other organs? According to the reimbursement claim records of two of the four health insurance agencies covering approximately 70% of Israelis (personal communication), only a small proportion of candidates for non-renal organ transplants underwent transplantation abroad. Yet with insurance policies that guarantee transplants abroad and with transplant tourism being accepted as a solution for the lack of organs in Israel, minimal efforts and investments are made to increase organ donation at home. The rate of organ donation in Israel has remained stagnant over the last 10 years, while in the same period many other countries (e.g., Spain, Italy and the USA) have made significant progress in improving their donation rates. It is not unreasonable to conclude that transplant tourism is directly responsible for the low deceased donation rate.

With the stagnant number of deceased donors in Israel, mortality on the waiting list has exceeded the number of transplants (Table 3). In the first half of 2007, 17 patients on the liver transplant waiting list have died, and only 16 have been transplanted. With more patients undergoing assist device implantation, mortality among patients awaiting heart transplantation has not changed.

Transplant tourism can also be blamed for an indirect role in the decrease in living donor transplantation in Israel. In 1998, in an effort to increase the number of living donor transplants performed in Israel, the Ministry of Health approved unrelated living donation from an emotionally related friend or a distant relative. Unlike donation from a relative, unrelated donation involves an intentionally extended 3-month process to allow the potential

donor to change his or her mind and withdraw at any time. The donor undergoes a psychosocial evaluation both at the transplant center and at an independent psychosocial institute and in the final step is interviewed by a central committee of the Ministry of Health. This point of this legal initiative was to replace transplant tourism, but a review of our experience with regulated living-unrelated donation shows a different result. With the flourishing of transplant tourism, the overall volume of living donor transplants at our hospital (where we perform 80% of all living-donor transplants in Israel) has not changed. Whereas it was hoped that unrelated donation would increase the total number of living donors, unrelated donors are instead being used as alternatives to related donors (Table 4).

The indirect effects of transplant tourism on transplantation in Israel are significant. For example, the population of patients who do remain on the waiting list for kidney transplantation at home has changed; these are now mainly high-risk patients. Furthermore, admitting patients transplanted elsewhere early after their transplant (5 days to 1 month) with severe complications such as humoral rejection, infection or urinary leak or even with a failed graft frustrates the team and adds extra work and significant costs for local hospitals. In our experience, we have observed severe infectious complications acquired abroad which led to mortality in these patients, including 3 cases of aspergillosis, 2 cases of mucormycosis and one case of severe cholestatic hepatitis C. The rate of long-term complications from transmissible infections and malignancies in these patients is unknown but must be carefully assessed.

In June 2006 the Ministry of Health called for a new regulation demanding that health insurance agencies to limit referrals for transplant abroad to specific circumstances that guarantee the absence of organ trade. The Ministry of Health also initiated a new transplant bill aiming to promote organ donation in Israel and prohibit organ trade, hopefully a step forward that will reshape transplantation practice in Israel. Without any change in donation

figures in Israel and with the Ministry of Health regulation not enforced yet by law, transplant professionals continue to prioritize transplant tourism and advocate it to their patients as it seems to be the easiest route for transplantation with a shortest waiting time.

In summary, transplant tourism by Israelis is limited mainly to kidney transplantation and is not a solution for shortage of other organ transplants. Based on a utilitarian ethos, transplant tourism contradicts the altruistic basis on which transplantation has evolved, and in most cases involves exploitation of impoverished or imprisoned local donors. The Israeli experience shows that transplant tourism is directly associated with decreased living donation and negatively affects deceased donation. In addition it has a negative indirect effect on transplantation practice by corruption of transplant professionals, prevention of the development of organ donation, and increases in costs and burdens on local teams. All efforts should be made to prevent the overwhelming flourish of transplant tourism worldwide and develop other legal alternatives to increase deceased and living donation within the altruistic concept.

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Table 1

Israel Transplant National Candidate and Kidney Transplant List
for 2001-2005 (Excluding Non-Dialyzed Patients)

Year	Patients (n) Listed	Deceased Donor (n) Transplants	Living Donor (n) Transplants	Transplants (n) Abroad
2001	726	92	81	60
2002	566	101	71	73
2003	594	60	75	67
2004	469	79	59	63
2005	497	90	67	87
2006	506	98	54	72

Table 2

Kidney Transplant (TX) Rate at Rabin Medical Centre (2001-2005)

Year	Patients Listed (n)	TX in Israel (n)	TX Abroad (n)	Total TX (n)	Annual TX Rate (%)
2001	122	44	39	83	13.6
2002	123	45	32	77	15.6
2003	158	42	37	79	16.6
2004	122	39	26	65	26.6
2005	150	20	26	46	30.6
Total	675	190	160	190	

Table 3
 Health Insurance Claims for Non-renal Transplants Abroad*
 vs Transplants in Israel and Deaths on the Waiting List

Year	Heart				Liver				Lung			
	Listed	TX abroad *	TX in Israel	Died waiting	Listed	TX abroad *	TX in Israel	Died waiting	Listed	TX abroad *	TX in Israel	Died waiting
2001	113	1	14	Missing	110	10	43	Missing	38	-	14	Missing
2002	111	1	24	Missing	139	11	51	Missing	30	-	18	Missing
2003	112	6	17	Missing	143	19	34	Missing	38	1	21	Missing
2004	116	10	17	24	116	18	42	27	39	3	29	10
2005	120	13	16	20	129	20	45	19	37	4	34	15
2006	107	10	24	26	101	17	50	34	47	3	45	15
2007 Jan.- June	123	8	9	9	117	6	16	17	50	2	12	8

*Data on transplants abroad provided by two health insurance agencies covering 70% of Israelis

Table 4

Organ Source in Patients Being Followed at the RMC Kidney Transplant Clinic

