

Organ Trade between Kidney Donors and Recipients: A Case of Transplant Tourism

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Introduction

Kidney transplantation has gained recognition as an effective therapy for end-stage renal disease.¹⁻³ Over the past decade, there has been a global increase in the number of patients with end-stage renal disease coupled with a shortage in the supply of indigenous kidneys.⁴ These issues have fueled the development of “transplant tourism”, where potential recipients travel abroad to obtain organs from donors through commercial transactions.⁵ Transplant tourism accounts for approximately 5-10% of the kidney transplant procedures performed annually across the world.⁶

During the 21st century, numerous unfortunate cases of brokers, physicians, and hospitals engaged in illegal organ trades have been featured in the media.⁷⁻⁸ Postings on websites have offered all-inclusive “transplant packages”, where the price of a renal transplant package ranges from US\$ 70,000 to 160,000.⁵ Transplant tourism highlights the ethical issue of exploiting vulnerable organ donors and potentially causing physical and psychosocial implications for organ recipients.⁷

The purpose of this editorial is to:

1. illustrate a hypothetical case of organ trafficking from the perspectives of the donor (“seller”) and the recipient (“buyer”);
2. increase public awareness of the medical, psychosocial, and ethical implications of transplant tourism using a cost-benefit analysis; and
3. highlight public health measures that should be implemented by governments, healthcare providers, and policymakers to halt transplant tourism.

The Story of Fiona – A Kidney “Buyer”

Fiona is a 35 year-old woman with deteriorating kidney function. She receives hemodialysis treatments three times

each week, with each treatment lasting between three to four hours, at a medical clinic in the United States. Although dialysis relieves symptoms of uremia, she finds it inconvenient and time-consuming to devote such a large amount of time performing this treatment on a continual basis.

Fiona was placed on the waiting list for a kidney transplant for the past 3 years. Unfortunately, her position on the waiting list has not progressed much over this time. In the US, there are over 100,000 patients waiting for a kidney transplant, with an average wait time of five to ten years.³ Desperate to avoid this lengthy waiting time, Fiona posted an advertisement on an Indian website (“The Organ Trade”) to request a kidney donation in exchange for US\$ 80,000. She knew that India is one of the most common organ-exporting countries, where organs from local donors are regularly transplanted to foreigners through sale and purchase.⁵

Within one week of posting the advertisement, she received a phone call from an anonymous transplant agency in India informing her that a woman was willing to donate a kidney to her. Fiona was ecstatic to hear that the “gift of life” was awaiting her in India. She immediately made arrangements to travel to India to purchase the kidney from the anonymous donor and undergo the transplant surgery. Two days after her transplant surgery, she quickly returned to her hometown in the United States. Consequently, she suffered numerous post-transplant complications, which subsequently led to graft failure and the need for dialysis again.

It is evident that the transplanted kidney was poorly matched between the donor and the recipient, as neither parties underwent the standard pre-transplant medical evaluation to determine their suitability and compatibility for transplant. This event has reduced Fiona’s chances of ever receiving another kidney transplant, as her immune system is now highly sensitized from the previous transplant.

The Story of Arif– A Kidney “Seller”

Arif is a 19-year-old teenager from India who hoped to purchase the latest 64 GB iPad from Apple Inc. However, he was unable to afford this luxury item given his financial constraints. In order to earn extra cash, he called the number in the classified advertisement posted on the Indian website (“The Organ Trade”), which offered a huge monetary com-

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compensation in exchange for a kidney. Although Arif was aware that there may be life-threatening consequences associated with a kidney transplant surgery, he still made the decision to donate his kidney for monetary compensation.

The following week, Arif underwent a surgical nephrectomy. Subsequently, he used the compensation he received to purchase a 64 GB iPad. The joy of possessing something he had always dreamed of seemed to overcome the physical pain caused by the surgery (at least initially). Arif spent several hours every day playing trendy games such as Angry Bird and Fruit Ninja on his new iPad. Within one week, he became a popular person in school – the guy with a shiny iPad and an ‘attractive’ scar.

Unfortunately, the joyful addiction of ‘fame and game’ did not last long. Arif was eventually hospitalized due to the intense abdominal pain that radiated through his surgical site. During his nights at the hospital, he suffered other complications including bleeding, fatigue, and nausea. He felt disembodied for selling his kidney and lost his sense of human dignity. Ironically, Arif’s economic condition actually deteriorated after the surgery, despite the initial monetary windfall. Not only did he drop out of school, but he also accrued debt from the large medical expenses associated with his post-operative care.

Discussion

This hypothetical case of organ trafficking from the perspectives of the donor and recipient illustrates the dismal side of transplant tourism. Is this organ trade worth it? It may be wise to do a cost-benefit analysis from the perspectives of buying and selling a kidney (Table 1). While transplant tourism may bring short-lived benefits among organ sellers, it often leads to declined quality of life, economic loss, post-operative complications, loss of dignity, and social stigma.⁹⁻¹² Using a cross-sectional study of 305 kidney sellers, Goyal and colleagues found that most of the monetary compensation was used to pay off personal debt. However, the average family income declined by one third after nephrectomy (P<0.001), and the number of participants living below the poverty line increased.¹²

For organ buyers, transplant tourism is associated with numerous acute complications (e.g. urinary infection, acute kidney injury, graft rejection) and chronic complications (e.g. poor kidney function, graft survival, and overall survival) that can result in graft failure and need for dialysis.¹³⁻¹⁸ Compared to domestic transplant recipients, transplant tourists have significantly higher cumulative incidence of acute rejection at 1-year post-transplant (P=0.02).¹⁷ Moreover, another study reported that transplant tourists were at higher risk for developing donor-transmitted viral diseases such as hepatitis B and cytomegalovirus infections.¹⁷

In light of these detrimental effects of transplant tourism, public health measures are currently being developed and implemented by governments, healthcare providers, and policymakers to halt transplant tourism. The federal government has implemented initiatives such as the Organ Donation Breakthrough Collaborative to increase the legal donor pool in developed countries such as the United States, Canada,

and Australia.⁴ Physicians and health professionals play a key role in raising awareness of organ trafficking and promoting collaborative, evidence-based measures to prohibit transplant tourism. Furthermore, policymakers have suggested changes in the policies of deceased organ donation to that of “presumed consent”, which mandates that every deceased individual becomes a potential organ donor unless he or she specifically refuses to consent.⁴ It is imperative for developing countries (especially those with a strong history of organ trafficking) to develop a judicial infrastructure to regulate organ procurement and promote ethical considerations within the healthcare system and the public. Further research should be devoted to explore alternatives such as the large-scaled paired donor-recipient exchange program and strategies to promote living donation.

Table 1. Potential Benefits and Costs of Selling and Buying a Kidney

Selling a Kidney		Buying a Kidney	
Benefits	Costs	Benefits	Costs
Monetary compensation	Single kidney	Extra kidney (i.e. “gift of life”)	Risk of graft rejection or graft failure
Overseas visa (if transplant occurs overseas)	15-20 inch permanent scar (if open nephrectomy)	Quick way to receive a kidney	Sensitization of the immune system
Purchase of luxury items (e.g. iPad)	Post-surgical complications (e.g. bleeding, infection)	Free from long-term dialysis	Poor post-operative management
	Symptoms from impaired kidney function (e.g. generalized fatigue)		Exploitation of the poor
	Social stigma (e.g. loss of human dignity and integrity)		Poor kidney function, graft survival, and overall survival rate
	Economic issues (e.g. unemployment, school drop-out)		

Conclusion

The altruistic act of organ donation, or bestowing “a gift of life”, is being tainted by an increased incidence of organ trafficking. From the case study, it is evident that both the kidney “seller” and “buyer” experienced medical and psychosocial complications after their transplant. Such an illicit act raises the ethical issue of exploiting vulnerable organ donors and potentially causing severe medical and psychosocial implications for organ recipients. Considering its benefits and risks, transplant tourism should not be performed or promoted under any circumstances. Public health measures are currently being developed and implemented to halt transplant tourism, which include establishing a regulated and ethical system of organ procurement, promoting paired donor-recipient exchange programs, and increasing awareness of organ trafficking among healthcare providers and the public.

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