

Psychiatric disorders: are they an absolute contraindication to living donation?

Little information has been published about the suitability of candidates for living organ donation who have a past or current psychiatric diagnosis. A retrospective review of 445 living donor kidney transplants performed at Barnes-Jewish Hospital's transplant center from 1995 to 2005 disclosed 42 donor candidates with such a history, prompting detailed psychological evaluation. Although 41 candidates (10% of the donor pool) met criteria for 1 or more psychiatric diagnoses, none were considered psychologically unfit for donation. Of these, 22 candidates underwent kidney donation without medical or surgical complications and without development of subsequent active psychological problems. Several donors maintained long-term contact up to 12 years to report good health and a high degree of satisfaction with the decision to donate. This experience suggests that for donor candidates with a psychiatric diagnosis, formal psychiatric evaluation to evaluate current mental health stability is warranted. Stable individuals, on or off therapy, can be considered fit to donate with expected short- and long-term outcome prognoses similar to those for the general population. (*Progress in Transplantation*. 2009;19:128-131)

**Anthony A. Rowley, MA,
Barry A. Hong, PhD,
Susan Martin, RN, Linda
Jones, RN, Anitha Vijayan,
MD, Surendra Shenoy, MD,
Martin Jendrisak, MD**

Washington University (AAR, BAH,
AV, SS, MJ), Barnes-Jewish Hospital
(SM, LJ), St Louis, Missouri

Corresponding author: Barry A. Hong,
PhD, FAACP, Washington University
School of Medicine, Department of
Psychiatry, 660 S. Euclid, Campus
Box 8134, St Louis, MO 63110
(e-mail: hongb@psychiatry.wustl.edu)

To purchase electronic or print reprints,
contact:

The InnoVision Group
101 Columbia, Aliso Viejo, CA 92656
Phone (800) 809-2273 (ext 532) or
(949) 448-7370 (ext 532)
Fax (949) 362-2049
E-mail reprints@aacn.org

Currently, more than 83 000 patients are awaiting kidney transplantation in the United States.¹ The organ shortage has led many transplant centers to accept more liberal criteria for living donor candidacy and to permit donation by individuals outside the family unit, including anonymous donors. Yet questions remain about the suitability of prospective candidates and their capacity to give consent, especially potential donors with mental health issues.

Despite its importance, little information on the psychiatric status of living donor candidates is available to guide the evaluation process and establish proper criteria. To our knowledge, no published reports detail how transplant centers currently evaluate the current and past status of living donors. The absence of this information may give the false impression that a psychiatric history is considered exclusionary for an otherwise

suitable donor candidate. However, the existence of a psychiatric disorder among donor candidates is quite likely, given the substantial prevalence of such disorders in the general population. According to the Epidemiologic Catchment Area Study, the 12-month prevalence estimate of mental disorders for American adults was 20%, with a lifetime prevalence estimate of 32%.² The more recent US National Comorbidity Survey Replication estimated mental disorders at 26% and 46% for 12-month and lifetime prevalence, respectively.³

Although it is unlikely to be the practice of most transplant centers to summarily exclude donor candidates with a psychiatric illness, the lack of available reports may lead some to this impression. The few studies that refer to use of a living donor with a past or current psychiatric disorder do so without clarifying the diagnosis or detailing how the decision was made

to allow the individual to donate. This report summarizes the experience at Barnes-Jewish Hospital's transplant center with this special donor group.

Barnes-Jewish Hospital Transplant Center

From January 1, 1995, to December 31, 2005, 445 kidney transplants from living donors were performed at our center, with 42 medically eligible kidney donor candidates referred for detailed psychological evaluation. Potential donors initiate contact with the center to begin evaluation. A series of interviews with the nurse coordinator, social worker, and transplant surgeon are set up to review all pertinent information, laboratory tests, and imaging data. Potential donors are also interviewed and examined by a nephrologist who is not part of the transplant team, but acts as an advocate for the patient from a medical perspective. This nephrologist refers any patient for whom motivation, capacity to consent, or mental health is a concern to the kidney transplant psychologist. Any team member could recommend that a patient be seen by the transplant psychologist. Generally, the nephrologist makes the referral on the basis of past and current history of a psychiatric disorder or just a clinical impression that a psychological evaluation would be warranted.

Demographics

Psychiatric Illness in Donor Candidates

Forty-two donor candidates were referred for possible psychiatric disorder, 41 of whom were subsequently confirmed as warranting a psychiatric diagnosis by symptom or treatment history, using the criteria from the *Diagnostic and Statistical Manual of Mental Disorders* (Fourth Edition).⁴ These candidates were currently in remission or stable on psychiatric medication. No patient had these medicines decreased or stopped before surgery. An additional 9 candidates had taken psychiatric medications more than 60 days before evaluation. Eight individuals reported a remote suicide attempt or suicidal gesture. Demographics of this candidate group are shown in Table 1. Table 2 lists all diagnoses found, including comorbid diagnoses.

Donation Outcomes

All donor candidates in this sample were found by a psychologist to be presently stable and capable of giving informed consent, and they were all subsequently cleared for donation. Eighteen candidates never made it to surgery for reasons unrelated to their psychiatric status; reasons included medical contraindications to transplantation in the recipient, interim allocation of deceased donor organs to the recipients before evaluation of the living donor was completed, donors subsequently choosing to opt out, and refusal by the recipient to proceed with transplantation from the donor. No candidates were excluded on the basis of a

Table 1 Demographic characteristics of 41 donors

Characteristic	No.	% ^a
Age, y		
Mean	36	
Range	18-53	
Sex		
Male	11	27
Female	30	73
Race		
White	37	90
African American	4	10
Status		
Married	19	46
Single	11	27
Divorced	10	24
Separated	1	2
Related to recipient	17	41
Unrelated to recipient	24	59
Psychiatric medications ^b		
Current	23	56
Remote	9	22
None	9	22
Suicide attempt/gestures	8	20

^a Percentages do not always add up to 100 within a category because of rounding error.

^b Includes antidepressive, antipsychotic, antianxiety, antiseizure, sleeping pills, and Antabuse (disulfiram).

psychiatric disorder. Those living donors who did undergo surgery all resulted in a successful transplant. The final donor pool was composed of 22 donors with psychiatric illness, which involved 5% of the 445 living donor transplants conducted during the study period.

Table 2 Psychiatric diagnoses found in the 42 referred donor candidates^a

Diagnosis	No.
Major depressive disorder ^b	22
Alcohol/substance abuse	9
Bipolar disorder	4
Anxiety disorder	5
Moderate depression	2
Dysthymia	2
Learning disorder	2
Schizoaffective disorder	1
Atypical depression	1
Eating disorder	1
Adjustment disorder	1
None	1

^a Numbers include comorbid and additional diagnoses and therefore total to more than 42.

^b Includes recurrent cases and cases in remission.

Table 3 Comparison of donor cohort lifetime diagnoses with lifetime estimates for the general population

Mental disorder	WUSTL	ECA	NCS-R
Major depressive	6.3	6.4	16.6
Alcohol/substance abuse	1.0	20.0	4.6
Bipolar	0.5	—	3.9
Anxiety/panic/phobia	0.5	24.4	28.8
Dysthymia	0.5	3.3	2.5
Atypical depression	0.5	—	—
Eating disorder	0.0	—	—
Learning disorder	0.9	—	—
Adjustment disorder	0.5	—	—
Schizoaffective/schizophrenia	0.5	1.5	—
Population ^a	10.0	32.0	46.4

Abbreviations: ECA, Epidemiologic Catchment Area Study; NCS-R, National Comorbidity Study-Revised; WUSTL, Washington University in St Louis Medical Center.

Dash indicates no data available.

^a Population percentages include comorbid and additional diagnoses and therefore are not equal to the sum of individual diagnoses.

Table 3 shows that the prevalence rates for psychiatric illness among our donor pool were much lower than in the general population, according to either the Epidemiologic Catchment Area Study or National Comorbidity Survey Replication.^{2,3} No evidence of a psychiatric episode was witnessed by transplant team members or reported by the donors immediately after surgery or at 3- or 6-month follow-up. No donors had any problems develop that could have been associated with the donation surgery. Moreover, no significant adverse events that required rehospitalization or additional surgery occurred either. Those donors who could be reached for long-term follow-up up to 12 years reported good general health and a high degree of satisfaction with their decision to donate.

Discussion

Although the use of living donors with psychiatric conditions may seem controversial, we have not found any compelling reason to routinely exclude donor candidates who have met diagnostic criteria but may be in remission or otherwise symptom-free for a current psychiatric episode. Although they have not reported on actual donor use, other researchers have similarly supported the idea that donor evaluation guidelines should not perfunctorily exclude persons with a mental illness. As an example, Leo and colleagues⁵ stated that “a prospective donor who has been able to maintain stability [of their psychiatric illness] for a sustained period of time may, in fact, be quite suitable as an actual donor.” In our center, stability was measured in years of psychiatric care and years without psychiatric hospitalization.

Stability (often characterized by a year, 6 months, or a specific number of months without psychiatric episode) seems to be the key to determining whether a particular candidate would make a suitable living donor. Additionally, taking a psychotropic medication with improvement for a period of months has been considered proof of stability. In a consensus statement on the live organ donor, a group of transplant specialists concluded that the

discovery of psychosocial problems, including psychiatric illness, should not automatically exclude persons who wish to donate. Rather, such findings signal the need for more intense evaluation, discussion, and possible intervention to optimize donation.⁶

We support this position. Unfortunately, reports on the use of such donors have not been previously available.

Although a persistent concern regarding mental illness in potential living donors is the donor’s ability to understand the significance of the transplant procedure and give informed consent, evidence indicates that these concerns may be greater than is warranted. For example, in studying cognitively impaired individuals, Buckles et al⁷ found that virtually all mildly demented and even two-thirds of moderately demented individuals understood consent information. The authors of the MacArthur Treatment Competency Study found schizophrenia to be only moderately related to deficits in competence and

the relation is not strong enough to presume that serious thought disturbance identifies deficits in understanding, reasoning, or appreciation of a type sufficient to presume that a person is not able to make treatment decisions.⁸

Other researchers have reached similar conclusions, as evidenced in remarks such as: “many patients with serious mental disorders are capable of making medical decisions,”⁹ and “it is clear . . . many seriously mentally ill people are not incompetent on most measures of incompetency.”¹⁰ It should be noted that no study has been reported that addresses the effects of cognitive disorder or serious mental illness on the capacity to decide on organ donation. Only conditions that prevent candidates from fully understanding the consequences of organ donation (eg, severe mental retardation, significant cognitive impairment, or current substance abuse) should exclude a candidate from participation if corrective measures are not possible.

Although many psychiatric illnesses have conventionally been regarded as poor prognostic factors for

successful transplant, no data seem to indicate which donors are at greater risk for later complications.¹¹ With estimates of the prevalence of psychiatric disorders ranging between 32% and 46% nationally,^{2,3} many potential living donors would never submit themselves for evaluation if they believed that their psychiatric status made them ineligible to donate. The decisions about what exclusionary criteria to use in evaluating potential donors are not clear-cut and vary from center to center.¹¹ This variation leads to difficult judgments, especially in cases where only one donor is available for a given recipient.¹² In our experience, persons with psychiatric disorders can and have been successfully used as donors, even in cases involving serious and lifelong conditions such as bipolar disorder. A routine exclusion based on psychiatric illness alone would unnecessarily have prevented these candidates from donating, regardless of the strength of their desire to do so, and further denied lifesaving organs from being delivered to waiting recipients. We suggest that should a person be found to be psychologically unfit to become a donor during the initial evaluation, that person should be given the opportunity to enter treatment if practical and be reevaluated after a suitable period.¹³ There do not seem to be any grounds to routinely prevent a person from becoming a living donor solely because of the discovery of psychiatric illness.

Limitations and Future Research

Although we are quite gratified with these findings, they suggest that patients with serious psychiatric disorders can be used as living donors. We must acknowledge some limitations of our study. Our sample was small and from 1 center, and our study involved a psychologist and a transplant team that have worked together for many years. The transplant center is a large, active, and productive center, and gaining a larger sample would require a multisite and multicenter study of this issue. Further, no patients in this study had schizophrenia. Although 4 patients in

the study had bipolar disorder, these numbers are still small, and no patients had cognitive disorders or were excluded on the basis of a personality disorder. These are certainly limitations to the present study, but we think our experience lays the foundation for larger and definitive future studies in this area.

Financial Disclosures

None reported.

References

1. Organ Procurement and Transplantation Network. National data report. <http://www.optn.org/data>. Accessed January 23, 2009.
2. Robins LN, Regier DA. *Psychiatric Disorders in America: The Epidemiologic Catchment Area Study*. New York, NY: The Free Press; 1991.
3. Kessler RC, Berglund P, Demler O, Jin R, Merikangas KR, Walters EE. Lifetime prevalence and age-of-onset of DSM-IV disorders in the National Comorbidity Survey Replication. *Arch Gen Psychiatr*. 2005;62(6):593-602.
4. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. 4th ed. Washington, DC: American Psychiatric Association; 1994.
5. Leo R J, Smith BA, Mori DL. Guidelines for conducting a psychiatric evaluation of the unrelated kidney donor. *Psychosomatics*. 2003;44(6):452-460.
6. Abecassis M, Adams M, Adams P, et al. Live Organ Donor Consensus Group. Consensus statement on the live organ donor. *JAMA*. 2000;284(22):2919-2926.
7. Buckles VD, Powlisha KK, Palmer JL, et al. Understanding of informed consent by demented individuals. *Neurology*. 2003;61(12):1662-1666.
8. Grisso T, Appelbaum PS. The MacArthur treatment competency study. III: abilities of patients to consent to psychiatric and medical treatments. *Law Human Behav*. 1995;19(2):149-174.
9. Druss BG. Cardiovascular procedures in patients with mental disorders. *JAMA*. 2000;283(24):3198-3199.
10. Saks ER, Jeste DV. Capacity to consent to or refuse treatment and/or research: theoretical considerations. *Behav Sci Law*. 2006;24(4):411-429.
11. Erim Y, Malagó M, Valentin-Gazamo C, Senf W, Broelsch CE. Guidelines for the psychosomatic evaluation of living liver donors: analysis of donor exclusion. *Transplant Proc*. 2003;35(3):909-910.
12. Ramcharan T, Kasiske B, Matas AJ. Living donor kidney transplants: the difficult decisions. *Transplant Rev*. 2003;17(1):3-10.
13. Fisher MS. Psychosocial evaluation interview protocol for living related and living unrelated kidney donors. *Soc Work Health Care*. 2003;38(1):39-61.