Transplant psychiatry

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Abstract

The number of transplant procedures undertaken in the UK is increasing steadily, although the number of potential recipients is rising at a faster rate. Psychiatrists in substance misuse, alcohol, and general adult services are increasingly likely to encounter patients who await or possess a solid organ transplant, often for reasons causally related to their mental disorder, such as alcoholic liver disease. They therefore need to understand the roles of the small number of highly specialized transplant psychiatrists who work alongside transplant teams. Transplant psychiatrists are often required to help select among recipients, guided in part by protocols that set out absolute and relative psychosocial contraindications to transplant listing, such as continuing substance dependence. Mental disorders are considered contraindications to the extent that they predict excess mortality, morbidity, or non-compliance leading to graft failure. Guideline development is hampered by a lack of studies linking mental disorders to post-operative outcome. Some factors, such as obesity and continued smoking, are more clearly linked to adverse outcome, and transplant psychiatrists may be asked to give opinions and offer management in these areas. Increasingly, transplant psychiatrists are also required to help in assessing potential live donors. In the case of non-directed donors, such assessment is mandated by UK law. Post-operative management has close parallels to the work of liaison psychiatry after any major surgery, particularly as regards delirium, post-traumatic stress disorder, and adjustment disorders, but when mental disorder threatens graft survival, specialist work alongside transplant teams is again required.

Keywords contraindication; donor; live donor; mental disorder; non-compliance; organ; psychiatry; recipient; selection; transplant

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Introduction

Organ transplantation is now an established form of treatment for a variety of medical disorders, and transplant rates are rising, though still outstripped by demand. The number of patients who possess or await a transplant is therefore increasing. Inevitably a proportion will have mental disorders that bring them into contact with psychiatric services.

Mental disorders may be incidental to the need for transplantation, or causally related to it in a variety of ways (Box 1).

Some of the interaction between mental disorder and transplantation is the highly specialized purview of transplant psychiatry, but many patients will have contact with general psychiatrists, or those working in alcohol and drug services, who need a non-specialist's understanding of the field.

The transplant psychiatrist's role can be broadly divided into helping the transplant team to:

- widen the donor pool to include suitable live donors
- select among potential recipients
- improve transplant outcomes.

Widening the donor pool: pre-transplant assessment of *donors*

Cadaveric organs are in short supply, despite efforts to increase public awareness and thereby donation rates, the use of donors hitherto discounted for age or co-morbidity, and new surgical techniques. Partly as a result, transplantation from living donors is increasingly common in the UK, and now comprises approximately one-third of kidney transplants (almost 900 per year in the UK), although rates still lag behind those of some other nations. Transplants of lung lobe or liver lobe from living donors are also possible, but the number of procedures undertaken in the UK to date remains very low.

Most live donation is dyadic: donors give organs to recipients who are genetically and/or emotionally related to them. Paired transplants have now been undertaken in the UK, allowing live donation between incompatible donor–recipient pairs. Other arrangements, of increasingly complex logistics, have been undertaken elsewhere[1] and are imminent in the UK. They involve various concatenations of incompatible donor–recipient pairs, sometimes set in motion by a non-directed donation (see below). The psychiatric issues are not intrinsically different from those that may arise in a dyadic transplant.

All live donor transplantation involves major surgery, with attendant risks, on healthy individuals who do not stand to benefit directly. Potential donors and recipients are therefore assessed rigorously to ensure the risks are minimized, and the process may require the opinion of a psychiatrist or clinical psychologist. If, for example, a potential donor has a history of recurrent depressive illness, a psychiatric assessment is indicated. This may well identify a significant risk of a depressive relapse after surgery, just as a cardiologist may identify significant peri-operative risks in a donor with a cardiac history. Judgements about whether these risks are too great to proceed are essentially paternalistic and are made by the transplant teams, informed by opinion from appropriate specialists. The decisions, and the reasons for them, are then shared with the potential donor and (if the donor agrees) the recipient. Second opinions at other centres may be offered if the donor still wishes to pursue transplantation.

Relationship between mental disorder and transplantation

Pre-transplant

- Mental disorder may generate need for transplant

Directly (via ingestion of toxic substances)

  - Alcoholic liver disease, alcoholic cardiomyopathy
  - Fulminant liver failure after paracetamol overdose

Indirectly (via exposure to infective agents)

  - Chronic hepatitis C after intravenous drug use

As a result of treatment

  - Renal failure after long-term lithium use

- Mental disorder (past or present) may also be entirely coincidental

Peri-transplant

- Organic mental disorder as a result of surgery and medical treatment
  - Delirium
  - Hallucinosis due to immunosuppressants
  - 'Steroid psychosis', steroid-induced mood disorder

Post-transplant

- Mental disorder secondary to surgery and its consequences
  - Adjustment disorder, post-traumatic stress disorder
  - Mood disorder
- Relapse of mental disorder that led to need for transplant
  - Substance misuse
  - Further self-harm
- Behavioural problems threatening graft survival
  - Non-compliance with immunosuppression, follow-up, etc.

Box 1

Psychiatric or psychological assessment may also be required where there is no mental disorder in donor or recipient, but where the relationship between them appears dysfunctional, for example undue pressure from either to proceed, despite the other's reluctance.

Non-directed (altruistic) donors

Non-directed ('altruistic' or 'Samaritan') donors are those who wish to donate an organ anonymously, just as blood donors give to unknown recipients. The Human Tissue Act 2004 made non-directed donation possible for the first time in Britain.[2] It also mandated psychiatric assessment in such cases, to be undertaken before any invasive pre-transplant investigation. The purpose of psychiatric review is not to approve or disapprove a potential donor's motives, but to exclude from donation and its risks those whose wish to donate arises from an identifiable mental disorder, such as substance misuse, significant mood disorder, or personality disorder. Early experience in the UK[3] has identified all three in people coming forward as potential non-directed donors, consistent with the findings of a recent systematic review of experience elsewhere, mainly the USA.[4]

Independent assessment

The same Human Tissue Act 2004 built in further protection for living donors by requiring review by an independent assessor (IA), trained and accredited by the Human Tissue Authority, as the last step before setting a date for surgery. The purpose is to confirm the nature of the relationship between donor and recipient, to assess the donor's understanding of the risks, and to exclude coercion or duress. The assessor is usually a doctor in a non-transplant field (which could be psychiatry), but may be a senior nurse or a non-clinician such as a hospital chaplain. Where there is a history of mental disorder in a potential donor, the IA may expect to see evidence that this has been appropriately assessed and found not to be a barrier to transplantation.

Selection: pre-transplant assessment of *recipients*

Despite an expanding programme of live donation, there are insufficient organs to meet recipient needs. It follows that such organs as do become available must be put to best use, and utilitarian principles entail the exclusion of potential recipients whose co-morbidities (including mental disorder) confer risks of poor graft or patient survival. Candidate patients are therefore assessed carefully before being added to transplant lists, and transplant teams often seek advice from psychiatrists and others on the co-morbidities specific to their specialties.

The psychiatrist's role is not to offer a view about whether the patient should be transplant listed or not, but to provide a specialist opinion that the transplant team can use when making their decision – as they do with opinions from other specialists. However, members of transplant teams are often more knowledgeable and experienced in other physical specialties (e.g. cardiology) compared with psychiatry, and there is a greater potential for stigmatization when considering mental disorders. There are therefore advantages in having psychiatrists embedded in transplant services, who can liaise with the candidate's own psychiatrist and general practitioner (GP), and contribute to meetings where decisions to list potential recipients are made.

Psychiatric assessment of candidates for transplant listing

Not all potential candidates require psychiatric assessment, which is indicated by a past or present history of mental disorder, especially when that disorder may have generated the need for transplant (Box 1). The assessment should provide an accurate diagnosis of any mental disorder(s), covering severity, prognosis, management and manageability, complications, and risk of death including via suicide. It should then provide guidance as to how this disorder might affect the patient's ability to understand what is involved, to cope with the demands of living with a transplant, and to look after a graft by complying with treatment requirements.

Where a mental disorder has led to the disease, the transplant team requires guidance on the likelihood of recurrence of the causative behaviour, and the feasibility of intervention to prevent it. This arises most commonly in patients with alcoholic liver disease who are currently abstinent and seriously unwell: what is the risk that, once medically improved after transplant, they will return to harmful drinking and thereby endanger, not simply themselves, but a graft that could have gone to someone else? And what services are available to minimize this risk?

As in assessing potential living donors, psychiatrists may be asked to help with potential recipients who may not be mentally