

Providing a psychiatric service to liver transplant patients

The first 2 years of the Scottish Liver Transplant Unit

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The Scottish Liver Transplantation Unit (SLTU) opened in the Edinburgh Royal Infirmary in November 1992. We describe the liaison psychiatric input during its first 23 months. Sixty-five patients were seen from 69 referrals and their case notes were studied retrospectively to obtain information on patient demographics and details of each psychiatric involvement. A high level of psychiatric morbidity was found and psychiatric opinion contributed to the transplant assessment procedure. Our results indicate the need for good liaison psychiatric input with subsequent resource implications.

Liver transplantation is an increasingly available option for individuals with end stage liver disease. Although a complex procedure with around 25% one year mortality, it does offer the possibility of improvement in both physical and mental well-being (Collis *et al.* 1995) and quality of life (Bonsel *et al.* 1992). As many as 29% of those who receive a transplant may have psychological symptoms postoperatively (Visa, 1993). The factors which determine a poor psychological outcome await further clarification, but evidence suggests that those with pre-operative dysfunctional social and family relationships do less well (Trzepacz & DiMartini, 1992).

In assessing an individual's suitability for transplant a number of factors must be considered. With the growing awareness of the prevalence of psychiatric morbidity in such populations and its relation to outcome, the value of a psychiatric input to the assessment procedure is increasingly recognised (Lucey, 1993; Surman, 1994). Indeed, it has been argued that not only is there a role for psychiatrists in assessing suitability for transplant but that overall there is a need for the identification and treatment of psychiatric illness to be better established as part of the treatment programme (Commander *et al.* 1992).

The SLTU in Edinburgh Royal Infirmary opened in November 1992. It has a total of 12 beds, two dedicated for intensive care and two for high dependency. The unit is staffed by three

consultant physicians and two consultant surgeons. Referrals are taken from across Scotland and on occasion elsewhere. The Department of Psychological Medicine provides a liaison psychiatric service to the whole Royal Infirmary. It is staffed by one consultant psychiatrist along with two half-time and one full-time psychiatric registrars. Periodically a senior registrar is attached to the Unit. Referrals from the SLTU are made by medical staff. The consultant psychiatrist regularly attends weekly SLTU review meetings.

The study

A retrospective casenote analysis was undertaken of all referrals from the SLTU to the Department of Psychological Medicine from 10 November 1992 to 1 September 1994. Both medical and psychiatric casenotes were reviewed. Information was collected on patients' demographic details, medical and psychiatric histories. Information was recorded from the standardised liaison psychiatry forms completed at the time of assessment which included making up to three diagnoses according to ICD-10 guidelines (WHO, 1994).

Findings

A total of 65 patients were referred. During this same 23 month period, 177 people were admitted to the SLTU (referral rate of 37%), 65% of those referred were pre-transplant.

Demographics

The numbers of men and women referred were very similar. Patients ranged in age from 13-66 years with an average age of 44. Forty-three per cent were single and 38% had little or no family support. Thirty-four per cent were unemployed. The majority lived in Scotland but outwith the Lothian area.

Medical history

A third of patients suffered liver failure secondary to alcohol abuse and a further third due to a drug overdose of paracetamol (Table 1). Twenty-five of the 65 patients referred underwent liver transplantation, 28% of these transplants were for alcoholic liver disease and 20% for fulminant liver failure due to a paracetamol overdose. Benzodiazepines, in particular temazepam, were the most commonly prescribed psychotropic drugs by SLTU medical staff (17% of referrals).

Psychiatric morbidity

Twenty-nine of the patients (45%) referred had a past history of contact with the psychiatric services (Table 2). In the majority, this was as a result of alcohol abuse. Of the seven who had previously self-harmed, five had been admitted to the SLTU after a drug overdose. At interview, 27 (42%) had an abnormal mental state including 13 who were depressed (Table 3). In only 11 of these 27 referrals had the medical staff stated that the patient was displaying signs of mental illness. Medical staff only recognised six patients to be depressed from the 13 found at psychiatric examination.

Suitability for transplant

Most psychiatric referrals were in order to determine suitability for transplant (Table 4). In

Table 1. Medical diagnoses in patients referred and patients transplanted

Medical diagnosis	% Referred to psychiatrists (n=65)	% Transplanted (n=25)
Alcoholic liver disease	31	35
Hepatitis	12	50
Non-alcoholic cirrhosis	22	64
Overdose	32	24
Other	3	0

Table 2. Psychiatric history of referrals by ICD-10 classification

Past psychiatric history	Referrals (n=65)
None	33
Alcohol dependence	14
Deliberate self-harm	7
Depressive illness	5
Drug dependence	2
Alcohol dependence & depressive illness	1
Paranoid schizophrenia	1
Conduct disorder	1
Bulimia nervosa	1

Liver transplant assessment

Table 3. Diagnosis at interview in those with abnormal mental state (n=27)

Diagnosis at interview (n=27)	Pre-transplant	Post-transplant
Depressive illness	7	6
Delirium	6	1
Generalised anxiety disorder	0	1
Dependent personality disorder	1	0
Paranoid schizophrenia	1	0
Organic mood disorder	0	1
Mild cognitive disorder	1	0
Adjustment reaction	1	0
Acute psychotic disorder	1	0

Table 4. Reasons for psychiatric referral

Reason for psychiatric referral	% Total referrals
Assessment for transplant	57
Alcohol abuse	34
Overdose	31
Psychiatric symptoms	20

the two cases where listing for transplantation was not advised, one was continuing to abuse alcohol and one was considered too depressed to cope with the operation. The criteria for advising against liver transplantation were as follows:

- Fulminant liver failure due to paracetamol overdose (O'Grady et al, 1991)*
past history of repeated suicide attempts
persistently expressed wish to die before the onset of encephalopathy.
- Alcoholic cirrhosis (Beresford, 1994; Osorio et al, 1994)*
organic brain disease
polydrug misuse
sociopathy/unstable character disorder
multiple failed attempts at treatment/rehabilitation of alcoholism
denies alcohol abuse and no intent to abstain
period of less than 6 months abstinence from alcohol prior to assessment.

Psychiatric interventions

Psychotropic medication was recommended for only five of the 65 referrals; antidepressants for three, benzodiazepines for two and neuroleptics for one. One patient was referred for alcohol counselling and one was instructed in anxiety management techniques. Advice was given to nursing staff in six cases as to how they might manage anxious patients and those finding it difficult to adjust to the prospect of a transplant.

Service issues

On average, there were three psychiatric referrals from the SLTU per month. The majority were for the assessment of transplant suitability and most (48%) were referred within 48 hours of admission to SLTU (range 0–66 days; 75% referred within one week). The liaison team responded promptly – 49% were seen the same day and 88% within 48 hours of referral (range 0–7 days). The consultant psychiatrist first saw 40% of cases and reviewed all cases where a psychiatric opinion on suitability for transplant was sought. Most patients required to be seen only once (58%) but 11 required more than two visits and 20% needed psychiatric follow-up.

Comment

The results of this study demonstrate the high levels of psychiatric morbidity in this population. Forty-three per cent of patients referred pre-transplant and 41% referred post-transplant had an abnormal mental state at interview. Forty-five per cent had a previous psychiatric history and at least 15% of the total population admitted to the SLTU had evidence of psychological morbidity. Research to date has failed to adequately clarify the relationship between psychological symptoms and post-operative outcome and these figures lend support to the need for further work in this area.

Twenty-two per cent of those referred had been alcohol dependent. Recently there has been controversy about the cost-effectiveness of transplanting such individuals, given their high rates of recidivism. Research suggests that with rigorous selection criteria such patients can achieve good post-operative outcomes (Lucey & Beresford, 1992). Thus it seems appropriate that patients with a history of alcohol abuse have a full psychiatric assessment.

Thirty-one per cent referred had overdosed with paracetamol. These patients were younger than those with other forms of liver disease, one girl was only 13, and in the majority their behaviour had been impulsive. These cases serve as a reminder of the serious consequences which can result from paracetamol overdose.

As other studies of hospital in-patients have found (Vorsch, 1995), the medical staff in this unit under-reported depressive symptoms and it was apparent from the casenotes that there were no clear criteria for deciding if or when a psychiatric opinion should be sought. However, this study only looked at referrals made in the early days after the SLTU opened when resources were limited. The medical staff during this period became increasingly aware of the need for psychiatric involvement with their patients and this is borne out by their steadily increasing

referral rate – indeed 59 cases were referred in the subsequent 12 months. It was felt that they would have liked to have referred even more patients but they were aware of the finite psychiatric resource available. We suggest that there is a need for staff in such a unit to be offered training in the detection of psychological symptoms and that formalised referral criteria should be developed and implemented.

Assessing suitability for liver transplant is a complex procedure. Given the serious nature of these patients' underlying physical condition, their levels of psychiatric morbidity and the expenditure incurred in performing such operations, it could be argued that in all cases a psychiatric opinion should be sought and this should be given by a senior psychiatrist. In a liaison service such as the one we describe, where there is only one consultant, this would have major implications for the service as a whole. Although such patients represented only a small percentage of the overall workload of the psychiatric unit, they needed to be seen quickly, each assessment took at least one hour and a significant percentage (20%) needed ongoing psychiatric review. We would conclude that when a specialist unit of this nature is to be established there is an acknowledgement of the need for liaison with the psychiatric services and that appropriate resources are identified and funded.

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