



## CASE SERIES

# Biopsychosocial Stressors in Pre-liver Transplant Patients: A Case Series

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## Summary

Liver transplant candidates undergo multiple stressors due to the complexity of the medical, social and psychological circumstances about the transplantation. These stressors may predispose candidates to psychiatric disorders or acute responses.

**Method:** Authors looked at the medical documents of 43 transplant candidates referred from Jan 2015 to May 2018 retrospectively. The biopsychosocial stressors extracted from the psychiatrist and social worker's notes.

**Results:** Common stressors include liver failure physical symptoms, relationship stressors, facing the medical diagnosis and the prognosis, financial strains, and transplant workup.

**Discussion:** High rate of relationship stressors indicates the necessity of considering relationship wellbeing of candidates. Also, it is very important to be mindful of the impact of communication about patient's liver condition on their mental states.

common in pre-transplant candidates [2].

Of all liver transplant candidates, 35-73% have sleeping disorders [3] due to the combination of hepatic encephalopathy and stress. The correlation between the level of anxiety and etiologic diagnosis showed that 71% of patients with alcoholic cirrhosis and 60% of those with liver cancer showed a minimal degree of anxiety, and 27% of patients with autoimmune cirrhosis had severe anxiety [4]. In another study, most of the patients described having psychological reactions during the diagnostic period and after they received a diagnosis. Half of the patients expressed existential questions about life and death. A major theme was fear of dying before they reached transplantation [5].

Patient's caregivers are also exposed to a high level of stress. They have a high rate of anxiety [6] and depression [7]. The pressure on the caregiver creates a vicious cycle and affects the transplant candidate again.

## Introduction

Liver transplantation can be a long and complicated process. It involves the diagnosis of liver cirrhosis, follow-up, multiple investigations, multidisciplinary assessments, discussions in transplant committee, placing the patient on the transplant list, and finally, waiting for a transplant. This process can be very stressful for the patient and their families. The current demand for transplants is higher than the availability of donors, causing a long wait and increasing patient mortality, a fact that causes psychological stress [1] which may trigger psychopathologies which are very

## Method

Psychiatric assessment is not a mandatory part of liver transplantation workup. The liver transplant team would only refer patients with some concerns about their mental well-being stemming from their current or past presentation. The author looked at the referrals to the consultation-liaison psychiatry of Princess Alexandra Hospital from Jan. 2015 to May 2018. Fifty-seven patients were referred for a pre-liver transplantation psychiatric assessment during this time. These patients were referred for an evaluation of their suitability for liver transplantation, to manage a current mental

illness, or to prevent a deterioration of mental states pre- and post-transplantation. Six patients were cut out of the transplant list before being seen by consultation-liaison psychiatry, so they did not require a psychiatric assessment. Two patients died, and two more patients withdrew from the transplant before the assessment. Two patients were also referred to other services for a psychiatric review. Altogether, out of 57 patients, 43 were found suitable for this study.

These 43 patients were all assessed by a consultant psychiatrist and some of them by social workers. The author looked at the notes, looking for the reason for referral to psychiatry, the underlying cause for liver transplantation, the psychiatric diagnosis made by the psychiatrist, and the biopsychosocial stressors verbalised by the patients at the time.

## Results

Alcohol-related liver disease was the most common underlying hepatic pathology in referred patients (67%), followed by hepatitis C (41.8%) (Table 1).

Nine patients (20.9%) did not report any specific stressor at the time of the review. The most common stressor reported by other patients was the physical

**Table 1:** Underlying reason for liver transplantation in referred patients to consultation-liaison psychiatry team.

Total Number	43
Alcohol related liver disease	29 (67%)
Hepatitis C*	18 (41.8%)**
NASH/NAFLD	4 (9.3%)
Autoimmune hepatitis	3 (6.9%)
Polycystic liver (and kidney) disease	2 (4.6%)
Primary biliary cirrhosis	1 (2.3%)
Caroli's syn	1 (2.3%)
Cryptogenic cirrhosis with portal hypertension	1 (2.3%)
Familial amyloid polyneuropathy	1 (2.3%)

\*1 patient with hepatocellular carcinoma; \*\*14 candidates had both alcohol related liver disease and hepatitis c.

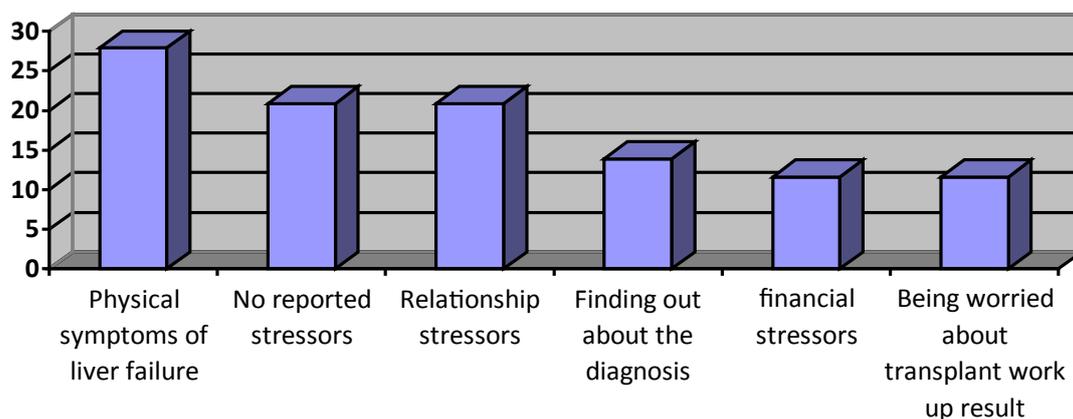
symptoms associated with liver failure (itchiness, confusion, insomnia, diarrhoea, urinary frequency, fatigue, dyspnea, restless legs, and constipation), followed by the stress of being told about having an end-stage liver failure and the proposed transplant plan by the treating team (Figure 1), and relationship stressors, such as disputes in the family or separation, with five patients (11.6%) who reported recent separation. Other common stressors included being worried about transplant workup results, and financial strains. Less common stressors included being concerned about post-transplant lifestyle and planning (4.6%), having an unwell family member (4.6%), not working and loss of social function (4.6%), being away from home to live closer to the hospital (4.6%), being confused about the proposed treatment plan (4.6%), feeling like a burden to the family (4.6%), and accommodation-related stresses (4.6%). One patient reported concerns about dying as a complication of transplantation, and another patient reported feeling stressed due to having multiple blood tests done.

## Discussion

This paper demonstrates the prevalence of some psychosocial stressors, such as the shock of being told about their liver condition, relationship disputes and separations, financial stressors, and being anxious about the transplant test results in candidates of liver transplantation.

The liver transplant process could be very anxiety provoking. The fact that 20.9% of candidates did not report any specific stressors despite having a severe medical disorder may indicate the reluctance of candidates to demonstrate their stresses due to the fear of being removed from the list. The other possibility is that the stressors have not been documented accurately despite being verbalised by the patients.

This study also shows the high incidence of relationship stressors, particularly separation (11.6%). The transplant workup process places both candidates and their partners under a lot of pressure, which could



**Figure 1:** Percentage of common biopsychosocial stressors in liver transplant candidates.

increase the risk of disputes and separations during this episode. One study showed that [8] the majority of caregivers had to alter personal plans, make work adjustments, and cope with frequent disruptions to family routines because of care giving demands, and these stressors were associated with more mood disturbances, lower life satisfaction, and less social intimacy with the patient. That is why a carer's care should be an essential part of the pre- and post-transplant management.

The other highlight of this report is the importance of effective communication by the transplant team with candidates. As reflected in the results, many patients undergo a considerable amount of stress by just being told about their illness and the proposed management plan. Many of them also become confused about the offered treatment and are not sure what the next step is. This confusion, added to some possible level of hepatic encephalopathy or minimal hepatic encephalopathy, can become a preoccupation for the candidates and be very anxiety provoking.

The main limitation of this study is the possibility of not assessing or having inadequate documentation of patients' current stressors.

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