

TOPIC HIGHLIGHT

Salvatore Gruttadauria, MD, Associate Professor, Series Editor

Psychological evaluation and follow-up in liver transplantation

Josephine G Morana

Josephine G Morana, Department of Clinical Psychology, Mediterranean Institute for Transplantation and Advanced Therapies (ISMETT), University of Pittsburgh Medical Center, Via Tricomi 1, Palermo 90127, Italy

Author contributions: Morana JG wrote the manuscript.

Correspondence to: Dr. Josephine G Morana, Mediterranean Institute for Transplantation and Advanced Therapies (ISMETT), University of Pittsburgh Medical Center, Via Tricomi 1, Palermo 90127, Italy. jmorana@ismett.edu

Telephone: +39-91-2192111 Fax: +39-91-2192344

Received: July 4, 2008 Revised: October 12, 2008

Accepted: October 19, 2008

Published online: February 14, 2009

Abstract

An increasingly number of transplant centers have integrated a psychological assessment within their protocol for evaluation of patients being considered for transplantation. This paper highlights the psychological criteria for inclusion or exclusion for listing, briefly discusses the psychological dynamics of patients, and addresses possible psychotherapy and pharmacological therapy, before and after transplant.

© 2009 The WJG Press and Baishideng. All rights reserved.

Key words: Liver transplantation; Psychology; Contraindications; Cognitive behavior therapy

Peer reviewer: Justin Nguyen, MD, Mayo Clinic, 4500 San Pablo Road, Jacksonville 32224, United States

Morana JG. Psychological evaluation and follow-up in liver transplantation. *World J Gastroenterol* 2009; 15(6): 694-696 Available from: URL: <http://www.wjgnet.com/1007-9327/15/694.asp> DOI: <http://dx.doi.org/10.3748/wjg.15.694>

INTRODUCTION

Orthotopic liver transplantation (OLTx) is a major surgical procedure that can precipitate distress, anxiety and depression. The experience of the last few years of many transplantation centers has highlighted the importance of a thorough and routine psychological assessment before considering the patient as a possible

candidate for listing^[1]. The importance of identifying psychological/psychiatric, and/or possible psychosocial problems is necessary in order to eliminate or prevent the insurgence of possible psychological problems post-transplant. Most transplant centers have included an initial psychological evaluation in their work-up protocol, to evaluate the psychological strengths and possible liabilities of the patient who is being considered for an OLTx, so as to provide interventions such as: smoking cessation therapy, drug/alcohol rehabilitation, and improvement of compliance; that is, behavior that needs to be resolved before surgery, in order to reduce possible behavioral liabilities after transplantation^[2].

The transplant itself has deep psychological implications, which may exist within the affective, social and interpersonal realm of the individual's personality. In the postoperative phase, there may be manifestations of adjustment disorders, psychopathological disturbances, problems with compliance, as well as non-adherence to the therapeutic plan^[3]. To reiterate, it is therefore necessary to carry out an accurate evaluation of the psychological and personality profile of each individual being considered for listing for possible OLTx.

PSYCHOLOGICAL ASSESSMENT OF THE POTENTIAL CANDIDATE FOR TRANSPLANT

During the initial interview, the psychologist's main goal is to determine how much the candidate knows or is aware of his/her medical status, or better yet, whether he/she has accepted his/her medical condition. The communication of the necessity of a liver transplant automatically induces the patient to think that conventional therapies and/or less invasive surgery are no longer an option. In such a case, the patients' psychological-emotional reactions take a course of their own, for example, they start experiencing: (1) sense of despair; (2) concerns for his/her medical status and sense of imminent death; (3) reactive and/or correlated psychopathology.

During the course of the psychological evaluation, then, patients may find themselves living two traumatic events (both real), at the same time: (1) sense of imminent death; or (2) rebirth through the transplant. During this phase, it has been observed that patients most often feel a sense of doubt, anxiety, ambivalence, fear and frustration,

which, if associated with a high level of psychological distress, can have consequences that can even lead to non-acceptance of the transplant. A careful psychological evaluation (cognitive, emotional and interpersonal) allows for an accurate course of psychotherapy^[4].

The therapist must take into consideration those needs, deficits and assets that the patients possess in order to bring them step by step toward the final objective, which is the transplant. The specific, individualized treatment plan allows for an improvement of the quality of life (QOL) of the patient who will undergo a transplant and, specifically, during the postoperative period^[4].

Ethically, the ability to give informed consent comprises three key elements: adequate information, adequate decision-making capacity, and freedom from coercion (President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research, 1982)^[5]. Therefore, to this end, it appears fundamental to the psychologist's evaluation, whose goal is to evaluate the degree of the patient's knowledge and understanding of the various items on the informed consent. To this extent, it is fundamental that the patient's ability for decision-making is evaluated. If there is a suspected inability to do this (because of mental retardation or social deficits, *etc*), then, it is imperative that further testing be done using standardized tools for the evaluation of IQ (e.g. Wechsler Adult Intelligence Scale-Revision). If mental deficiency is found, then it becomes a legal issue, that is, it is necessary to assign a legal guardian who can represent the patient, in order to protect his/her rights. In the absence of a cognitive defect, if it is evaluated that the patient has not fully understood the context of such a document because of difficulty in perceiving such information, or in the event that there is resistance in accepting such information, then it becomes imperative that the patients undergo a psycho-educational process, in order to induce them to adjust their non-functional behavior or lifestyle in accordance with the expectations of the transplant team. For example, patients might need to be educated on topics such as maintaining adequate personal hygiene, given that they will be treated with immunosuppressant medication for the rest of their lives.

Table 1 outlines the absolute and relative contraindications for transplant listing. Although each item needs detailed discussion, for the purpose of this paper, the discussion will focus on alcohol/drug addiction and psychopathology, which are the two contraindications that need the most active intervention of the psychologist. The candidacy of patients who have an addiction has varied within each transplant center; however, in recent years, there has been an attempt to formalize the criteria for such patients. In Italy, the Director of the National Transplant Institute assigned a group of psychologists and psychiatrists to work on the guidelines to be applied in transplant centers across the country. This group (GLI PSI TO), of which the present author is a member, debated and focused a lot of time and energy in determining the criteria for listing patients

Table 1 Contraindications for OLTx

Absolute
Irreversible cognitive-neurological deficits
Active psychosis
Active addiction to drugs and/or alcohol
Relative
Personality disorder
History of psychiatric disorders
History of alcohol and/or drug addiction
Depression
Neurosis
History of use of psychotropic/neuroleptics
Limited family and social support
Limited ability to adhere to therapies
Inadequate motivation

with addiction. The consensus was, also following the lead of guidelines set forth by the United Network for Organ Sharing, that patients may be considered for listing after 6-12 mo abstinence, and that they have to be active participants in a rehabilitation center (even as an out-patient). With such patients, during this period of abstinence at our center (Istituto Mediterraneo per Trapianti e Terapie ad alta Specializzazione; ISMETT), the treatment is two-fold: patients are sent to a rehabilitation center closest to their residence, where the main focus is the toxicological component of the problem; while at ISMETT, the psychologists work in full synergy with such centers in an attempt to give patient support, in order to access those possible psychosocial resources that are needed for a positive, favorable prognosis.

With regard to psychopathology, it is important to note that it is not always a contraindication for transplantation *per se*. In fact, if patients manifest an active psychosis, not well compensated even with pharmacological therapy^[6], it is obvious that this would be an absolute contraindication, especially since there is an absence of the necessary resources needed to undergo an OLTx. In other cases, however, such as in mood disorders and anxiety disorder, psychopharmacological therapy in conjunction with psychotherapy may ameliorate the disturbance to the point at which patients are placed in a condition in which they can reach a functional emotional, affective equilibrium that allows them to manage the eventual distress related to the transplant. Such patients, however, need constant support before, during and after transplantation. During the pre-transplantation phase, specifically for sensitivity to stress; in the post-transplant phase, most importantly because of immunosuppressant therapy that might precipitate mood swings, irritability, mania and anxiety. Psychotherapy and/or pharmacological treatment might be indicated during all the phases of the transplant process. Cognitive behavior therapy is the psychotherapeutic approach implemented at ISMETT, an approach which has been evaluated as being most beneficial with these patients, as they are individuals who tend to manifest traits such as depression, anxiety and phobia. Anxiety reduction techniques, autogenic training, systematic desensitization,

Table 2 Domains of the pre-transplant psychological evaluation

Informed consent
Personality profile
Psychopathology
Past/present psychiatric history
Effect of illness on daily life activities
Defense mechanism employed and coping skills
Motivation for surgery
Treatment compliance
Support from the family
Socioeconomic support (together with social worker's evaluation)
Awareness of information regarding the actual surgical event and future treatments
Use/abuse of alcohol and/or drugs (see paragraph on this topic)
QOL

relaxation techniques, guided imagery, pain management and hypnosis are techniques that might be implemented, and that normally bring more immediate results for the management of those symptoms already mentioned as those being manifested by patients during the transplant process (Table 2).

CONCLUSION

The role of the psychological assessment and monitoring during the pre- and post-transplant phases, as well as the ongoing follow-up intervention, is generally highly valued by organ transplant teams because of the

significant health consequences of organ transplant failure. Identifying and reducing psychological risk factors can play an important role in overall long-term success of transplantation.

REFERENCES

- 1 **Widows MR**, Rodrigue JR. Clinical practice issues in solid organ transplantation. In: Llewelyn S, Kennedy P, eds. *Handbook of Clinical Health Psychology*. Oxford: John Wiley & Sons, 2003
- 2 **Everhart JE**, Beresford TP. Liver transplantation for alcoholic liver disease: a survey of transplantation programs in the United States. *Liver Transpl Surg* 1997; **3**: 220-226
- 3 **Dew MA**, Dunbar-Jacob J, Switzer GE, DiMartini AF, Stille C, Kormos RL. Adherence to the medical regimen in organ transplantation. In: Rodriguez J, editor. *Biopsychosocial Perspectives on Transplantation*. New York (NY): Kluwer/Plenum Publishers, 2001: 93-124
- 4 **Dew MA**, Goycoolea JM, Switzer GE, Allen AS. Quality of life in organ transplantation: effects on adult recipients and their families. In: Trzepacz PT, DiMartini AF, eds. *The transplant patient: Biological, Psychiatric and Ethical Issues in organ transplantation*. Cambridge: Cambridge University Press, 2000: 67-145
- 5 **President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research**. Washington (DC): United States Government Printing Office, 1982
- 6 **Triffaux JM**, Wauthy J, Bertrand J, Limet R, Albert A, Anseau M. Psychological evolution and assessment in patients undergoing orthotopic heart transplantation. *Eur Psychiatry* 2001; **16**: 180-185

S- Editor Li DL L- Editor Kerr C E- Editor Yin DH