

# Psychiatric disorders and organ transplantation: an approach based on resources and resilience

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## SUMMARY

*The article focuses on psychiatric disorders, which are becoming increasingly common among the general population, and their compatibility with the transplant journey. After analyzing part of the literature on the subject, an attempt was made to describe our approach with respect to the eligibility of the patient with a psychiatric disorder to a possible transplant, and the psychological path followed by our patient in order to “neutralize” as much as possible the psychological risk factors, and enhance the protective factors that can facilitate the treatment process. The approach used by the psychology service and shared by the care team is based on the opportunity to recognize, for each individual case, risk and protective factors with regard to the planned care path and, based on this, evaluate the possibility of a transplant. This approach has proved to be effective for the treatment of patients with a psychological disorder and who need to face complex but necessary treatments in terms of survival.*

*Through the description of a clinical case we try to exemplify the main points of the approach based on resources and resilience. The clinical case herein reported regards a woman suffering from alcohol-related liver cirrhosis and bipolar disorder undergoing a deceased donor liver transplant.*

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## Conflict of interest

*The Authors declare no conflict of interest*

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**Key words:** transplantation, psychiatric disorder, resilience, psychological assessment

## Introduction

### The literature on organ transplantation in psychiatric patients

Psychiatric disorders are becoming increasingly common among the general population, therefore accounting also for a significant number in the population of patients with an end-stage organ disease requiring organ transplantation<sup>1</sup>. Some psychiatric disorders are reactive to the condition of a chronic disease requiring a transplant (depressive anxiety disorders) or are due to exacerbation of pre-existing disorders. Others are primitive to the state of a chronic disease or are even the cause (substance and/or alcohol addiction)<sup>2</sup>.

Mood and anxiety disorders are the most common disorder among the organ transplant patient population<sup>3</sup>. Many of these are pre-existing disorders, a phase in which the patient's quality of life is often significantly limited<sup>4</sup>. In the post-transplant phase, the risk of awakening a latent anxious depressive disorder is related to the stress associated with the complex care path and to the difficulties of adapting to the new clinical condition, as well as the immunosuppressive regimen<sup>5</sup>. Among anxiety disorders, post-traumatic stress disorder (PTSD) appears to be the most relevant one<sup>5</sup>. Psychotic disorders are more complex, based on what the literature suggests, and seem to be mainly connected to disorders already pre-existing in the pre-transplant phase. This brings attention to

the need for a careful assessment in the pre-transplant assessment phase in order to identify effective pharmacological treatments, and therefore avoid that psychotic symptoms may present in an acute form in the post-transplant phase, when they may have important repercussions on the therapeutic outcome<sup>6,7</sup>.

Increasingly often, the care team that determines a patient's eligibility for a transplant is faced with this question<sup>8</sup>. Can the successful outcome of the transplant and the improvement of clinical conditions improve/reduce the psychiatric symptoms of the potential transplant candidate? Or can such a psychiatric condition negatively affect the patient's post-transplant attitude, thus putting the successful outcome of the transplant at risk? The main national and international guidelines (Tab. I) seem to agree on the fact that a psychiatric disorder,

whether primary or reactive, cannot be an absolute contraindication to a transplant. However, it is necessary that the type and manifestation of the disorder be well assessed before the patient is listed for a transplant, carefully weighing his/her eligibility for the transplant journey in terms of lifestyle and compliance required<sup>9,10</sup>. The most commonly defined contraindications for solid organ transplantation on the basis of mental health include multiple suicide attempts despite full support, dementia, severe learning difficulties, medical non-compliance, active schizophrenia, and severe non-reactive depression. These problems must be considered in consideration of those factors that predict a favorable outcome, which include good cognitive function, adequate social support, and compliance with therapy<sup>11</sup>.

**TABLE I.** *Mental Health Disorders and Solid-Organ Transplant Recipients (from Corbett et al., 2013, mod.)<sup>13</sup>.*

Organ	Society	Absolute	Relative	Comments
Liver	American Association for the Study of the Liver Diseases (2) 2008  British Society of Gastroenterology	Continued destructive behavior resulting from drug and alcohol addiction  Nil	Significant psychiatric disorder must be under excellent medical control, with assurance that the patient can be compliant after transplantation, with adequate support from family and friends  Severe psychiatric disorder	
Heart and lung	International Society for Heart and Lung Transplantation (3) 2006	Active substance abuse	Mental retardation or dementia (class 2a); poor compliance with drug therapy (class 3)	Assessment concentrates on compliance, comprehension quality of life, and social evaluation (support)
Lung	American Thoracic Society (4) 1998	Nil mentioned	Poorly controlled major psychoaffective disorder, inability to comply with complex medication regimen, history of non-compliance with medical care or treatment plans even in the absence of documented psychiatric problem	Joint statement from International Society for Heart and Lung Transplantation, European Respiratory Society, and American Society for Transplant Physicians
Kidney	UK Renal Association (5) 2011  European Association of Urology (7) 2010	Nil mentioned	Living kidney donation also enables scheduling of transplantation at a time when the recipient is in optimal medical and psychological condition, and may be the only option in high-risk recipients  Psychiatric disorders for living donors and recipients	In use by NHS Blood and Transplantation  In use by NHS Blood and Transplantation

Patients with mental disorders, when adequately compensated from a symptomatological perspective and supported by an effective support network, have therapeutic outcomes comparable to those of the general population. Therefore, ruling out the transplant option based on the psychiatric diagnosis alone would be neither ethically nor clinically justified<sup>12</sup>. However, it can be ethically and clinically justified to deny access to transplantation to patients who, despite full relational support, would have an unacceptable quality of life or could not guarantee therapeutic compliance, thus risking losing the transplanted organ<sup>13</sup>. The greatest doubts regarding this problem concern the difficulties in predicting the repercussions that a transplant can have on the psychiatric symptoms even when they appear to be well compensated in the pre-transplant phase. The post-transplant path, is a highly stressful and unpredictable period in terms of possible complications, the required hospitalization period, and recovery time in terms of quality of life. Such discomforts, if intense and prolonged, could exacerbate the psychiatric symptoms or induce the patient to not fully adhere to the therapy, resulting in a psychiatric decompensation, thus jeopardizing the successful outcome of the transplant<sup>13</sup>. On the other hand, the same concern, though to a lesser extent, could also impact the population of non-psychiatric patients experiencing a particularly difficult and long post-transplant treatment course, thus causing strong emotional reactions to the point of manifesting significant psychiatric symptoms<sup>14</sup>.

## Description of activities and working methods

### The ISMETT clinical psychology service

At ISMETT, patients with end-stage organ failure with a transplant indication preliminarily undergo a psychological assessment in order to understand their overall psychological functioning, the social and relational context within which they live, and identify any psychopathological difficulties that could jeopardize the success of the transplant.

The assessment is mainly based on a psychological interview with the aim of retrieving an accurate medical history of the patient, creating a therapeutic relationship based on trust and collaboration, informing the patient about the transplant journey and detecting constraints and resources that can positively or negatively affect the treatment path. On some occasions it is necessary to deepen the initial psychological assessment with further in-depth interviews and, not infrequently, it is necessary to administer psycho-clinical tests or, in some cases, to refer the patient to a specialist psychiatric consult.

The first psychological assessment mainly investigates the following areas:

- awareness of the disease and motivation to treatment;
- acceptance and adaptation to the diagnosis of the disease;
- styles of coping and resilience;
- defense mechanisms and reactive modalities;
- therapeutic adherence;
- dysfunctional ideas regarding the disease and the care path;
- compatibility with expectations and personal values with respect to the envisaged life path;
- psychopathological/interpersonal area;
- presence of psychopathological/psychiatric disorders;
- abusive behaviors;
- aggressive conducts;
- past traumatic experiences not properly processed;
- disorders of the interpersonal and/or family sphere;
- social, interpersonal, emotional support area.

Based on the information collected, the patient's psychological eligibility for a possible transplant is determined. The patient who has absolute or relative psychological contraindications is referred, based on the specific goals to be achieved, to psychological/psychotherapy treatment within the ISMETT Psychology Service or the community. Also, based on the specific psychological scenarios identified, a personalized psychotherapy treatment is developed in order to limit as much as possible any factors of psychological vulnerability, as well as to further strengthen personal and family resources (see Figure 1).

### The approach based on resources and resilience

The greatest challenge of transplant psychology is the possibility, in the pre-transplant assessment phase, to carefully identify all those risk and protective factors that may hinder or facilitate the adaptation to the post-transplant condition.

Internationally, this approach is defined as a *vulnerability model*, representing a well-accepted conceptual framework to explain the development and outcome of psychiatric and psychosomatic disorders<sup>15</sup>.

The basic assumption of this model is that vulnerable people exposed to stress factors tend to have a poor psychosocial adaptation. Based on the so-called vulnerability indicators, it can therefore be possible to predict an inadequate adaptation. In transplant medicine, the assessment of the risk regarding post-transplant psychosocial adaptation plays an important role, and the identification of patients at risk is a major task of the pre-transplant psychosocial assessment.

However, to date, there are no studies identifying models or characteristics of the psychosocial variables that pre-

dict the post-transplant outcome. In the best case scenario, it is possible to test the prognostic validity of a few symptoms or isolated psychosocial variables in terms of post-transplant psychosocial or physical outcome<sup>15,16</sup>.

These reflections bring us back to the need to conduct an adequate and in-depth psychological and psychiatric assessment in the pre-transplant phase, but also to follow the patient accurately and consistently along the post-transplant journey, in order to prevent initial forms of discomfort that may turn into the onset of a psychiatric disorders. At the same time, this leads us to the possibility of grasping, already in the pre-transplant phase, not only the patient's limitations in terms of psychological and relational vulnerability, but also the resources that can be activated and used during the treatment process at an early stage, thus reducing the discomfort experienced by the patient before it translates into a full-blown psychiatric disorder.

This approach, basically based on resilience, is the one used by the Clinical Psychology Service.

More specifically, the approach based on resources and resilience is the one that is increasingly spreading within the field of psychology of health. This approach assesses and describes the psychological functioning of the person not only in nosographic diagnostic terms, but also in terms of functioning or malfunctioning of the individual or of the family system with regard to a given event<sup>17</sup>. The focus is shifted from the search for causes or culprits of the psychological distress to the accurate description of a psychological functioning. This is done with the aim of allowing a distinction between one form and another of discomfort and, above all, to understand the potential within each of the different forms of discomfort. This model of intervention encourages the psychotherapist, after identifying the traumatic experiences that have determined a psychological reaction, to investigate the resilient mechanisms that allowed the patient to overcome them<sup>17</sup>. In fact, the attitude of the clinician who, faced with psychopathological behaviors, is pushed to identify the functional and reparative value of the symptom, addressing the patient and the problem with an attitude of trust<sup>18</sup>.

## A clinical case

Barbara is a 42-year-old woman, divorced for 5 years, living with her two sons aged 16 and 5. She is the second child, and has 2 brothers. She was referred to our transplant center as she was suffering from decompensated alcohol-related liver cirrhosis, and during the clinical investigations she was also diagnosed with hepatocellular carcinoma. Her clinical history also showed a diagnosis of bipolar disorder.

Barbara comes to her first appointment showing an accelerated and disruptive speech, and a thought pattern characterized by fleeing ideas and high distractibility. She

has an eccentric look and is not very receptive to interactive feedback, with a prevailing egocentric and talkative language. She invades the therapeutic space with her strong emotionality, which is difficult to contain. Though the setting of the first assessment is oriented toward an initial pre-transplant evaluation, it is immediately clear that there is the need to create a functional therapeutic relationship in order to conduct a thorough psychological evaluation before expressing the patient's eligibility for a possible liver transplant. Barbara initially seems unable to understand the severity of her clinical condition while recognizing the dysfunctionality of the alcohol abuse behavior that caused the liver disease. In this regard, she explains this behavior as a reaction to the conflictual marital relationship resulting from the end of her marriage. Barbara reports that she was strongly hyper-involved in the dysfunctional relationship with her husband, who she defines as aggressive and violent, and whom she considered the cause of her alcohol addiction as well as the psychological breakdown that required psychiatric intervention. The patient reports being followed by a community psychiatrist who diagnosed her with bipolar disorder currently under pharmacological treatment. The onset of this disorder, which coincides with the end of her marriage, even if treated pharmacologically, has a frequent alternation of depressive episodes in which the patient remains in bed, in the dark, with hypomanic episodes in which she is euphoric and hyperactive.

The therapeutic attitude with the patient is to welcome and contain her with respect to the strong need to express her discomfort and suffering. But given her clinical condition, there is also the need to induce her to become aware of the state of illness, and to make her responsible for her dysfunctional behaviors (alcohol abuse, smoking, obesity) and the need for a change in lifestyle to manage the current clinical condition and, if necessary, be able to access a more effective treatment path.

After her suffering has been recognized, and she has been encouraged to regain control over her life, starting precisely from the state of illness, Barbara seems to show plausible intentions of collaboration and willingness to modify the dysfunctional relational balances at the basis of her malaise. However, her availability and motivation inevitably clash with her psychiatric disorder, not yet well compensated pharmacologically, with continual mood changes. Therefore, the next therapeutic step becomes that of creating a close and effective collaboration with her psychiatrist in order to reach a condition of psychiatric compensation that is fundamental to the continuation of the psychotherapy with the patient. Psychiatric compensation is achieved a few months after the first appointment, and stable monitoring by the ISMETT Psychology Service and Territorial Psychiatric Service. Barbara begins to become fully aware of her

clinical and life condition, clings to her parental role and the need to be a present and competent mother for her children to find the motivation to care, and also to start projecting herself with confidence into the future. Within a few months Barbara shows that she is gradually regaining possession of her life: she resumes taking care of her appearance and not only, taking care of her children carefully, managing her clinical condition and finding a balance even in relationships with the family of origin that shows itself to be supportive and ready to accompany the patient in the treatment path to be faced. Barbara is ready to undertake the transplant evaluation process, which will have to establish her eligibility for a liver transplant. After a careful diagnostic study, and given the compensation of the psychiatric disease maintained over time, the patient is deemed clinically suitable for inclusion on the waiting list.

However, the final decision regarding this clinical choice goes through a multidisciplinary discussion of the complex case, and this moment of exchange is strongly conditioned by the information on the patient's psychiatric state. The fear that a new psychiatric failure may compromise the successful outcome of the transplant puts the entire care team in crisis, and is divided between those who confidently welcome the psychological improvements that have occurred and those who, with skepticism, feel the responsibility not to waste a treatment path that involves the use of an organ, a precious and limited resource for each transplant center. The principal guidelines and the most recent scientific evidence in this area refer the final decision to the evaluation of the individual case and the responsibility of the care team. Faced with this difficult decision by the care team, the need to re-evaluate the information available by re-reading it in a new epistemological light becomes clear: therefore the case of Barbara, initially described as the case of a patient suffering from hepatocellular carcinoma with alcohol-related liver cirrhosis and bipolar disorder that requires hepatic transplantation, is re-interpreted as the case of a young woman and mother, suffering from a serious organ disease, the prognosis of which, without the transplant, would be highly unfavorable and who, despite being affected with a major psychiatric disorder, shows a well-compensated status in this regard (normothymia), with good compliance intentions and a supportive family. An approach aimed at seizing the healing and functional potential of the person and her family system allows for doubts about the continuation of the patient's care path to be resolved, allowing the team to grasp the critical issues but also the available resources. The careful re-evaluation of the peculiarities of the clinical case guides the multidisciplinary team to take responsibility for proceeding with the inclusion in the list, aware of the need to treat the case

with particular attention and competence, but confident of being able to offer the woman the possibility of taking advantage of a treatment path not precluded by a psycho-diagnostic label.

After a few months Barbara undergoes a liver transplant: she faces a post-transplant path that is not particularly complicated with a good therapeutic outcome. She is welcomed by a care team ready and prepared to face any difficulties or complications, not only clinical but also psychological, and this allows the patient to feel that she is taken in care globally, perceiving herself as a member of the care team, and therefore responsible in the first person of her behavior and her collaboration. Barbara has now been transplanted for 7 months, she is closely monitored by the ISMETT Clinical Psychology Service and by the territorial mental health center. The woman takes her youngest child to the first day of school, has regained some friendships and projects herself into the future with confidence, appreciating the newly found state of health. The past months have not been free of difficulties or therapeutic and psychiatric unforeseen events, however, Barbara and her family have always shown themselves capable of recognizing any moments of fragility and have been able to ask for help, and collaborate in the management of any problems.

Though we are aware that the time elapsed since transplantation is still too short to express ourselves, we are convinced that any difficulties or problems that we will face are comparable to those of other patients who face a complex path of care in conditions of psychological vulnerability, but who manage to take possession of the healing potential inherent in the same treatment path, while also reiterating the importance that in this, as in other cases, the active support of the family is paramount.

## Discussion

The clinical case reported here leads to a series of important reflections, starting with the awareness that the choice about transplant eligibility of a patient is a complex decision-making process that requires some important steps:

- possibility/opportunity for a constant and constructive exchange of views within the multidisciplinary team;
- identifying the most appropriate path of care, taking into account the benefit of each specific patient not only in terms of survival but also in terms of quality of life;
- not underestimating, from a psychological standpoint, the patient's peculiar and unpredictable reactive abilities triggered by emotionally restructuring events, such as a transplant.

In fact, we believe that the decision on the transplant eligibility of a patient must consider various levels of anal-

ysis: clinical choice, life prospects in terms of survival, quality of life, and risks/benefits of the care path for that specific patient, taking into consideration the values of the patient and his support system, etc. The indication for a specific care path, in fact, starts from a careful diagnosis and clinical prognosis, but must necessarily consider the patient's ability to give meaning to the disease, his/her motivation to treatment and to resume life plans, complying with the care path proposed by the clinical team. In this sense, we believe that every treatment must be designed and tailored to the patient, who must manage it in line with his path and life expectancy. This decision-making process, therefore, cannot be the task of a single professional, but must use all the care professionals who know the patient, his/her illness, his/her motivation for treatment, and his/her potential for adapting to the treatments offered.

Finally, we believe that valid guidelines on psychological indications and contraindications to transplantation must certainly look for those variables that predict a therapeutic success or failure. However, they cannot fail to take into account the potential inclination of every human to change and to adapt to highly stressful situations. This consideration makes the transplant process an emotionally restructuring event capable of reorganizing the psychological and relational balance of the individual who faces it.

## Conclusions

This paper intends to bring attention to the issue of psychiatric disorders as a possible contraindication to transplantation, proposing a specific modality of pre-transplant psychological assessments of patients with psychiatric comorbidities. The scientific evidence and our clinical experience guide our psychotherapeutic actions towards a psycho-diagnostic approach based on the patient's overall care and on the possibility of recognizing the modalities of functioning and malfunctioning with respect to the care path to be addressed. The clinical case described shows how an adequate assessment of protection and risk psychological factors, combined with an accurate multidisciplinary assessment, has allowed a young woman to access an effective care path that likely would have been denied to her within a rigid decision-making model unable to re-read information and events in a constructive way. Hence the desire to launch a message of "change" to the scientific community that deals with transplants, of re-reading the psychological assessment criteria through a new epistemological key aimed at seizing the underlying complexity of each person.

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