Psychological criteria for contraindication in lung transplant candidates: a five-year study*

Critérios psicológicos para contraindicação em candidatos a transplante pulmonar: um estudo de cinco anos

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Abstract

Lung transplantation presents a wide range of challenges for multidisciplinary teams that manage the care of the recipients. Transplant teams should perform a thorough evaluation of transplant candidates, in order to ensure the best possible post-transplant outcomes. That is especially true for the psychologist, because psychological issues can arise at any point during the perioperative period. The objective of our study was to evaluate the psychological causes of contraindication to waiting list inclusion in a referral program for lung transplantation. We retrospectively analyzed data on psychological issues presented by lung transplant candidates, in order to understand these matters in our population and to reflect upon ways to improve the selection process.

Keywords: Lung transplantation; Interview, psychological; Psychological tests; Preoperative care.

Since lung transplantation evolved to be the standard of care for patients with advanced lung disease, more than 32,000 procedures have been performed worldwide.[1] At our facility, 220 patients have undergone lung transplantation since the year 2000. However, the shortage of suitable donor lungs requires transplant professionals to select patients for lung transplantation only if they are likely to derive a significant survival benefit from the procedure.[2,3] In fact, approximately 17% of all lung transplant recipients die within the first year after transplantation,[2] which raises special concern regarding the selection of lung transplant candidates, because physicians must ensure that organ recipients will adequately care for their new organ.

Because lung transplant candidates can show emotional imbalance due to the disabling and life-threatening nature of their condition,[3] counseling such individuals presents a range of practice issues for psychologists. It is known that chronic lung disease is associated with an increased risk of depression and other mental disorders. Craven[4] studied 116 patients who were eligible for lung transplantation and found that nearly half had diagnosable psychiatric disorders such as major depressive disorder, anxiety disorder, and panic disorder, either in isolation or in combination. In addition, as pointed out by Manzetti et al.,[5] the time spent on a lung transplant waiting list is a period marked by substantial anxiety, and patients on the list deal with numerous health-

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Financial support: None.
Submitted: 27 October 2014. Accepted, after review: 26 February 2015.

 http://dx.doi.org/10.1590/S1806-37132015000004446

related stressors such as loss of physical capacity, frequent hospitalization, and progressive oxygen dependency.[5] In a review of the literature, Barbour et al.[3] found that lung transplant candidates can present high levels of psychological distress at the time of evaluation. The authors also found that psychological comorbidities in such individuals, if left untreated, can have a significant negative effect on clinical outcomes after transplantation.[3]

There is a general consensus that current or recent cigarette smoking is an absolute contraindication for lung transplantation, as are drug abuse, alcohol abuse, and severe psychiatric illness, and that adequate adherence to the prescribed medical regimen is critical to achieving a favorable prognosis.[6] Therefore, psychological assessment is an important step in the preoperative evaluation of transplant candidates, because it can identify behavioral patterns and emotional states that could affect the course of disease before and after transplantation.[7] The assessment of the patient level of understanding is another important aspect of the evaluation process, as is the determination of patient attitudes towards their disease, the determination of patient attitudes towards their upcoming transplantation, and the identification of a committed caregiver. The level of education, sociocultural competence, and cognitive functioning of lung transplant candidates should also be closely evaluated, because those are factors that could influence their adherence to post-transplant treatment.[3,7] Furthermore, in addition to the understanding of the transplant process, the patient level of motivation to undergo the procedure and to be involved in the process must also be taken into consideration.[3]

At our facility, the medical and surgical staff, together with a psychologist, a nurse, a physiotherapist, a nutritionist, and a social worker, make a comprehensive pretransplant assessment of each lung transplant candidate. All of the cases are then discussed in a weekly meeting of the multidisciplinary team, and this group collectively decides which patients will be placed on the lung transplant waiting list.

Our study, conducted by the Lung Transplant Group in the Pulmonology Department of the Heart Institute at the University of São Paulo School of Medicine *Hospital das Clínicas*, in the city of São Paulo, Brazil, was a retrospective analysis of the records of weekly multidisciplinary team meetings held between May of 2009 and May of 2014, with a focus on assessing the psychological issues. Our objective was to evaluate the psychological causes of exclusion from the waiting list in a referral program for lung transplantation. The opinions expressed by the Heart Institute Department of Psychology were reviewed, and the issues considered to be potential causes of post-transplant complications were categorized according to the criteria for indication and contraindication established in international guidelines for the selection of lung transplant candidates.[8]

We reviewed the data related to 345 cases presented at the weekly multidisciplinary team meetings. Patient ages ranged from 12 to 67 years, and 176 (51%) were female. Members of the Department of Psychology staff identified (relative or absolute) contraindications to transplant in 117 (33.91%) of the 345 patients (Table 1): chemical dependency within the last six months, in 4 patients; cognitive limitations associated with lack of adequate social support, in 3 patients; inadequate adherence to treatment, in 24 patients; the lack of a caregiver or absence of social support, in 43 patients; any psychological disorder that could compromise care (especially depression), in 34 patients; a lack of knowledge regarding the underlying disease and the transplant process, in 16 patients; uncertainty regarding the decision to undergo transplantation, in 11 patients; and absolute patient refusal to undergo transplantation, in 14 patients. It is of note that some of the patients had more than one complicating factor.

Of the 117 patients with psychological contraindications, 76 (64%) were referred for psychological follow-up and posterior reevaluation. At the end of the psychological assessments, patients were informed of all observed complicating issues and received guidance on how best to address them. They were all instructed to seek psychological support at the referring hospital or at the health care facility nearest their place of residence. Of the 76 patients who were reassessed, 45 (59%) were subsequently placed on the lung transplant waiting list. At this writing, 17 of those patients had undergone transplantation and 21 were awaiting surgery. Seven of the 45 died while on the waiting list.

The present study paints an interesting picture of the psychological problems affecting patients

Table 1 - Contraindications to lung transplantation.

Contraindication	n = 345
Patient refusal to undergo transplantation, n (%)	14 (4.05)
Chemical dependency within the last 6 months, n (%)	4 (1.15)
Inadequate adherence to treatment, n (%)	24 (6.95)
Any psychological disorder that could compromise care (especially depression), n (%)	34 (9.86)
Cognitive limitations associated with inadequate social support, n (%)	3 (0.86)
Lack of patient knowledge regarding the underlying disease and the transplant procedure, n (%)	16 (4.63)
Lack of a caregiver or absence of social support, n (%)	43 (12.46)
Uncertainty regarding the decision to undergo transplantation, n (%)	11 (3.18)
Total, n (%)	117 (33.91)

evaluated for lung transplantation at a single center. Organ transplantation, especially lung transplantation, involves an arduous process, with difficult steps presenting many psychological challenges, and these difficulties persist throughout the life of the recipient.[9,10] Therefore, patients should be emotionally stable and capable of dealing with individual frustrations, and the preoperative psychological evaluation should be able to identify those who are not prepared for the surgery, preventing them from undergoing a potentially harmful and unsuccessful procedure. However, because of their desire to gain acceptance from the transplant team, some patients might be guarded or could minimize their concerns.[3] The psychological evaluation should therefore be aimed at establishing empathy, providing patients the opportunity to share their concerns with a trained professional, and should be able to identify modifiable issues or absolute contraindications in this group of individuals.

For the transplant recipient, relief from the suffering associated with a chronic, incapacitating lung disease comes at a price—the trials of adhering to a long-term treatment regimen[6]—and psychological stability is essential to meeting that challenge. It is essential that patients recognize and consider these issues prior to transplantation, because comorbid psychological disorders, such as anxiety and depression, are associated with poor health practices throughout the transplant process and unfavorable post-transplant outcomes. After transplantation, psychosocial concerns tend to revolve around readjustment to a new lifestyle, which should also be a matter of great concern to the health care team. Therefore, lung transplantation presents psychologists with many features for assessment and intervention. Consequently, psychologists are fundamental members of the multidisciplinary team and are indispensable in the preoperative evaluation of lung transplant candidates, because certain psychosocial factors can be used in order to identify patients who should not undergo the procedure. Concerns such as unhealthy lifestyle behaviors, nonadherence to treatment, and the lack of a reliable caregiver (all of which were observed in our study population) are significant risk factors for poor post-transplant outcomes and must be addressed before a patient can be placed on the transplant waiting list.[3] It is of note that having an inappropriate caregiver is a special concern at our facility. Our task is to identify such problems and avoid submitting high-risk patients to the surgical procedure, thus allowing us to ensure that the patients selected are those most likely to reap the full benefits of lung transplantation. We should attempt to help patients with psychological issues resolve those issues and eventually meet the criteria for inclusion on the waiting list.

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