

Prospective Psychiatric Assessment of a Cohort of Spanish Heart Transplant Recipients



Evaluación psiquiátrica prospectiva de una muestra española de receptores de trasplante cardíaco

To the Editor,

Heart transplantation (HT) is the treatment of choice in cases of severe heart disease that do not respond to medical or surgical treatment. However, HT is also an invasive intervention and can have major psychiatric repercussions in recipients. Research on HT over the past decades has emphasized the importance of establishing an appropriate patient selection procedure to identify psychosocial factors that could influence patients' clinical course before and after transplantation.¹ To date, there is no systematic Spanish national registry of psychiatric factors associated with HT.²

The goal of this prospective observational study was to describe the principal psychiatric variables in patients on the transplant waiting list, and compare them with the results of a psychiatric follow-up examination 12 months after HT. The study examined patients consecutively included on the HT program at Hospital Clínic in Barcelona between January 2006 and December 2012 and who underwent HT. Participants were selected using a nonprobabilistic (incidental) sampling method and gave written informed consent. The protocol was reviewed and approved by the Clinical Research Committee.

Sample size was calculated on the basis of an accepted risk $\alpha = 0.05$ and an accepted risk $\beta < 0.2$ in a unilateral contrast, showing that a minimum of 9 patients was required to detect a difference of ≥ 5 points on the psychiatric scale used. The study protocol assumed a standard deviation of 5.3 and a loss of 20% during follow-up.

The pretransplant evaluation collected clinical and psychiatric variables using validated Spanish versions of the following instruments: a) structured clinical interview for DSM-IV Axis I and Axis II disorders according to the classification of the American Psychiatric Association³ and b) the Hospital Anxiety and Depression Scale (HADS),⁴ a 14-item self-screening test. The HADS gives a total score between 0 and 42 points (with a maximum 21 points on each subscale). The cutoff point established for caseness of a psychiatric disorder was an overall score of 12, and the cutoffs for a depressive or anxiety disorder were 8 points on the respective subscale. The HADS test was repeated in the follow-up evaluation 12 months after HT.

The initial sample included 78 patients on the HT program. Of these, 17 did not complete the follow-up protocol at 12 months after HT (9 were lost to follow-up, and 8 died in the postoperative period due to complications with the transplant).

The Table shows the clinical characteristics collected in the baseline evaluation before HT. The cardiological profile of the study population was similar to that observed in national HT programs. In the baseline evaluation, 41% of patients had a total HADS score above the cutoff for psychiatric illness. This proportion dropped to 21% in the follow-up evaluation.

The mean HADS scores obtained in the evaluations are presented in the Figure. To compare means of repeated measures, we first performed a Kolmogorov-Smirnov test to assess normality and goodness of fit. Means of variables that followed a normal distribution (total HADS score and the anxiety subscale) were compared by Student's *t* test. Variables on the HADS depression subscale followed a nonnormal distribution, and means were compared by Wilcoxon's nonparametric test. The statistical analysis showed significant reductions at 12-months' follow-up

in the total HADS score ($P < .001$) and in the scores for the subscales for depression ($P < .001$) and anxiety ($P = .04$).

In agreement with results published by other groups,^{5,6} our sample revealed a high prevalence of psychiatric disorders during the waiting-list period (32%), mostly depression and anxiety. Although the mean scores obtained in the HADS were below the cutoff for indicating morbidity, symptoms of anxiety and depression were significantly reduced 12 months after HT.

The main limitation of this study is that it cannot determine the influence of psychiatric variables on clinical course after HT, because it was not designed for a predictive analysis. Studies with larger patient populations would be needed to extend these results in order to more precisely determine the magnitude of the psychopathological changes produced after HT.

Psychiatric evaluation is important throughout the HT process because it enables the early detection and treatment of patients at risk of psychiatric disturbances. Our data support the conclusion that physical recovery after HT is generally accompanied by

Table
Baseline Clinical Characteristics of the Study Population (n = 78)

Age, y	55.8 ± 9.1 (30–72)
Men, %	77
Age at onset of heart disease, y	44.9 ± 11.2 (9–64)
Duration of disease before HT, y	11.4 ± 8.4 (0–42)
Pre-transplant heart disease etiology	
Ischemic heart disease	33 (42)
Non-ischemic heart disease	24 (31)
Valvular	7 (9)
Congenital	2 (2.6)
Other causes	12 (15)
History of psychiatric illness	
No	47 (60)
Yes	31 (40)
Depressive disorder	9 (12)
Substance abuse disorder	8 (10)
Anxiety disorder	7 (9)
Sleep disorder	4 (5)
Adaptive disorder	3 (4)
Current psychiatric illness	
No	53 (68)
Yes	25 (32)
Depressive disorder	8 (10)
Sleep disorder	8 (10)
Anxiety disorder	7 (9)
Personality disorder*	2 (3)
Current psychopharmacological treatment	
No treatment	53 (68)
Receiving treatment	25 (32)
Benzodiazepines	11 (14)
SSRI	6 (8)
SSRI and benzodiazepines	4 (5)
SNRI	2 (3)
Other antidepressive drugs	2 (3)

HT, heart transplantation; SNRI, serotonin-norepinephrine reuptake inhibitor; SSRI, selective serotonin reuptake inhibitor.

* One patient met the criteria for obsessive-compulsive disorder and another met the criteria for borderline personality disorder.

Unless indicated otherwise, data are presented as mean ± standard deviation (interval) or no. (%).

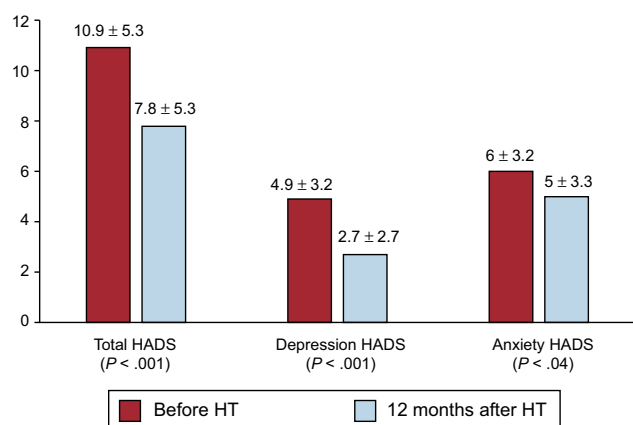


Figure. HADS scores during the waiting-list period and at 12-months' follow-up after the transplantation. HT, heart transplantation; HADS, Hospital Anxiety and Depression Scale; heart transplantation. Values are expressed as mean ± standard deviation.

an improvement in psychological parameters at 12-months' follow-up.

Roberto Sánchez,^{a,b,*} Eva Baillès,^c Anna Bastidas,^c
Félix Pérez-Villa,^d Antonio Bulbena,^{a,b} and Luis Pintor^{b,c}

^aDepartamento de Psiquiatría, Institut de Neuropsiquiatria i Addiccions, Parc de Salut Mar, Barcelona, Spain

^bDepartamento de Psiquiatría y Medicina Legal, Facultad de Medicina, Universitat Autònoma de Barcelona, Cerdanyola del Vallès, Barcelona, Spain

^cDepartamento de Psiquiatría, Institut de Neurociències, Hospital Clínic i Provincial de Barcelona, Institut d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS), Universitat de Barcelona, Barcelona, Spain

^dUnidad de Trasplante Cardíaco, Departamento de Cardiología, Instituto Clínico del Tórax, Hospital Clínic i Provincial de Barcelona, Institut d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS), Universitat de Barcelona, Barcelona, Spain

*Corresponding author:

E-mail address: 39639rsg@gmail.com (R. Sánchez).

Available online 27 October 2015

REFERENCES

1. Coglianesi EE, Samsi M, Liebo MJ, Heroux AL. The value of psychosocial factors in patient selection and outcomes after heart transplantation. *Curr Heart Fail Rep*. 2015;12:42–7.
2. González-Vílchez F, Gómez-Bueno M, Almenar L, Crespo-Leiro MG, Arizón JM, Palomo J, et al. en representación de los Equipos Españoles de Trasplante Cardíaco. Registro Español de Trasplante Cardíaco. XXV Informe Oficial de la Sección de Insuficiencia Cardíaca y Trasplante Cardíaco de la Sociedad Española de Cardiología (1984–2013). *Rev Esp Cardiol*. 2014;67:1039–51.
3. American Psychiatric Association. Manual diagnóstico y estadístico de los trastornos mentales (DSM-IV-TR). Barcelona: Masson; 2002.
4. Herrero MJ, Blanch J, Peri JM, de Pablo J, Pintor L, Bulbena A. A validation study of the hospital anxiety and depression scale (HADS) in a Spanish population. *Gen Hosp Psychiatry*. 2003;25:277–83.
5. 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;16:180–5.
6. Zipfel S, Schneider A, Jünger J, Herzog W. Anxiety, depressive symptoms and heart transplantation. In: Molinari E, Compare A, Parati G, editors. *Clinical psychology and heart disease*. Milano: Springer; 2010. p. 149–63.

<http://dx.doi.org/10.1016/j.rec.2015.07.025>

Influence of Gender and Cardiovascular Risk on the Control of Low-density Lipoprotein in a Population From Extremadura



Control de lipoproteínas de baja densidad en población extremeña en función del sexo y del riesgo cardiovascular

To the Editor,

The latest European Society of Cardiology and European Atherosclerosis Society guidelines for the management of dyslipidemias propose the definition of 4 levels of cardiovascular risk (very high, high, moderate, and low) to facilitate decision making and selection of the best therapeutic strategy.¹

However, several studies indicate that different diagnostic and therapeutic approaches to cardiovascular risk (CVR) are used for women and men, both in primary and in secondary prevention; pharmacological undertreatment is common among women in secondary prevention or at high CVR, whereas there is a tendency to overtreat women at low CVR.^{2–4}

The goal of this study was to evaluate the control of lipoprotein concentrations and the prescription of lipid-lowering drugs in the different stratification categories for CVR¹; CVR was estimated using the calibrated Framingham function from the REGICOR study⁵ in participants aged ≥ 35 years (1170 women and 1042 men) in the HERMEX study, based in Extremadura, Spain.⁶ Participant parameters included history of risk factors and cardiovascular diseases, anthropometric measures, blood pressure, ankle brachial pressure index, medication with lipid-lowering drugs, and blood analyses. Data were analyzed with SPSS 22.0 for

Windows. Significance of differences between mean values was calculated by Students' *t* test, and between median values by the Mann–Whitney *U* test; significance of differences between proportions was calculated with the chi-square test or Fisher's exact test. Multivariable analysis was conducted by logistic regression, using the “Enter” method, with the dependent variable defined as achievement or nonachievement of the target values for low-density lipoprotein cholesterol (LDL-C) in the very high or high CVR categories. Independent variables included all those showing an association at $P < .10$ in the bivariable analysis and others associated in the literature with the use of lipid-lowering drugs, such as age, a history of smoking, obesity, diabetes mellitus, hypertension, peripheral artery disease, or chronic kidney disease.

The mean age of the study population was 53.3 years. Of the participants, 31.2% were smokers and 35.4% fulfilled the criteria for hypercholesterolemia; 48.5% of participants considered to be hypercholesterolemic were receiving treatment with lipid-lowering drugs (46.9% of men compared with 50.0% of women; $P < .05$) (Table 1).

Analysis of CVR distribution showed that 27.1% of men were in the very high or high risk categories compared with 20.8% of women ($P < .05$). In contrast, 75.6% of women were at low CVR compared with 56.8% of men ($P < .001$). Of participants at very high or high CVR, 51.9% of men were taking lipid-lowering drugs vs 33.7% of women ($P < .05$); in the low CVR category, 8.8% of men were taking lipid-lowering drugs vs 12.7% of women ($P < .05$). Our study did not investigate the dose or type of drug prescribed, but given the prescription pattern of lipid-lowering drugs in the health system, it can be assumed that most were statins.