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Journal of Psychosomatic Research 61 (2006) 797–800

Journal of Psychosomatic Research

Short communication

Relationship between depression and quality of life in Nigerian outpatients with heart failure

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Received 12 October 2005; received in revised form 3 April 2006; accepted 27 April 2006

Abstract

Objective: Our objective was to evaluate the relationship between depression and health-related quality of life (QoL) in Nigerian outpatients with heart failure (HF). **Methods:** We used a cross-sectional study in which outpatients with HF (n=100) completed the WHO Quality of Life Scale—Brief Version to assess their subjective QoL. The patients were also assessed for the diagnosis of major depressive disorder (MDD) in accordance with the *Diagnostic and Statistical Manual of Mental Health Disorders, Fourth Edition*. **Results:** The factors independently associated with poor QoL include disability due to illness, presence of MDD, younger age, and longer duration of illness. Patients with MDD had worse QoL than patients without MDD on dimensions of physical health, psychological health, and environment. **Conclusion:** Depression adversely affects the QoL of patients with HF. Programs designed to improve the QoL of patients with HF need to incorporate the early identification and treatment of depression. Future studies are warranted to investigate the impact of improved depression management on QoL in patients with HF.

Keywords: Depression; Heart failure; Quality of life; Cross-cultural; Developing countries

Introduction

Heart failure (HF) is the most prevalent cardiovascular disease and leading cause of cardiac-related sudden deaths in Nigeria [1,2]. Patients with HF have impaired health status, marked functional limitation, and diminished health-related quality of life (QoL) [3]. Psychological comorbidities, particularly depression, often accompany HF and add to the complexity of clinical management. Studies from the western culture have shown that depression is common in outpatients with HF [4] and may be associated with increased medical cost [5], increased risk of hospital admission and mortality [6], and decline in health status and QoL [7].

Search of the literature revealed a dearth of studies on both depression and QoL in patients with HF in sub-Saharan Africa. There may be cross-cultural differences in the psychosocial impact and emotional response of patients in developing cultures to a chronic illness such as HF.

This aim of this study was to determine the relationship between depression and HRQOL in outpatients with HF in Nigeria.

Materials and methods

Design: a cross-sectional study

Subjects

The subjects consisted of a consecutive series of 105 outpatients with HF who were recruited from consultant cardiologist clinics of the Obafemi Awolowo University

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0022-3999/06/$ – see front matter © 2006 Elsevier Inc. All rights reserved.
doi:10.1016/j.jpsychores.2006.04.022

Teaching Hospitals Complex (OAUTHC), a tertiary health institution in southwestern Nigeria. All patients were black Africans and were recruited over a period of 3 months. Inclusion criteria include classification as "definite" (score, 8–12) on the Boston criteria [8] and diagnosis with, and treatment for, HF by attending consultant cardiologists for at least 6 months prior to the recruitment. The Boston criteria for the diagnosis of HF were used to select patients for the study since invasive procedures were not possible in an underdeveloped setting like this. Excluded from the study were patients who were not clinically stable or patients who recently had an acute exacerbation of symptoms.

Instruments

The WHO Quality of Life Scale—Brief Version (WHOQOL-BREF) [9]: This self-administered generic questionnaire assesses the subjective QoL of patients over the preceding 2 weeks. It has 4 domains and 24 items, with each item scored between 1 and 5. The questionnaire includes the seven-item physical health domain (score range, 7–35); the six-item psychological health domain (score range, 6–30); the three-item social relationship domain (score range, 3–15); and the eight-item environment domain (score range, 8–40). Higher scores indicate better QoL. The WHOQOL-BREF has good psychometric properties [10].

Mini International Neuropsychiatric Interview (MINI) [11]: The MINI is a brief structured diagnostic interview for major Axis I psychiatric disorders in the *Diagnostic and Statistical Manual of Mental Health Disorders, Fourth Edition* (*DSM-IV*) that has good validity and reliability.

Data collection

Written informed consent was obtained from the participants after the aims and objectives of the study had been explained. The Ethics and Research Committee of the OAUTHC approved the study protocol. On clinic visits, the subjects, seated in a quiet room, first completed a questionnaire detailing sociodemographic variables and the WHOQOL-BREF. Clinical variables, including duration of illness, New York Heart Association (NYHA) functional classification, medical history and comorbid medical conditions, prescribed medication, and the latest electrocardiography (ECG) findings, were obtained from case files. On the same day, the patients were interviewed by two trained psychiatrists, using the MINI, for the current diagnosis of major depressive disorder (MDD).

Statistical analysis

The Statistical Package for the Social Sciences 11 (SPSS, Inc., Chicago, IL) program was used for statistical analysis. The domain scores of the WHOQOL-BREF served as dependent variables. Independent variables included sociodemographic and clinical variables. The independent variables were entered into a linear regression analysis to determine the significant correlates of each domain of the WHOQOL-BREF. Specific relationships between the diagnosis of depression and each of the domains of the WHOQOL-BREF were tested by independent t tests, and mean differences were calculated. Significance was computed at $P<.05$.

Results

Sociodemographic variables, comorbidity, and medication

Of the 105 participants recruited, five had incomplete data, leaving a sample size of 100. Sociodemographic

Table 1
Sociodemographic and clinical variables

Variables	Values
Sociodemographic	
Mean age (years) [mean (S.D.)]	63.17 (10.34)
Sex (male) [*n* (%)]	58 (58.0)
Marital status [*n* (%)]	
Single/never married	3 (3.0)
Married	48 (48.0)
Divorced/separated	15 (15.0)
Widowed	34 (34.0)
Employment status [*n* (%)]	
Employed	30 (30.0)
Disabled (not working) due to illness	70 (70.0)
Socioeconomic status [*n* (%)]	
High	14 (14.0)
Middle	45 (45.0)
Low	41 (41.0)
Illness-related variables	
Mean duration of illness (months) [mean (S.D.)]	18.5 (11.04)
NYHA classification [*n* (%)]	
Class I	13 (13.0)
Class II	41 (41.0)
Class III	38 (38.0)
Class IV	8 (8.0)
Comorbid cardiac conditions [*n* (%)]	
Hypertension	58 (58.0)
Dilated cardiomyopathy	11 (11.0)
Rheumatic heart diseases	10 (10.0)
Congenital heart diseases	8 (8.0)
Others	15 (15.0)
Comorbid noncardiac conditions [*n* (%)]	
Diabetes mellitus	58 (58.0)
Chronic obstructive pulmonary diseases	15 (15.0)
Chronic liver diseases	6 (6.0)
ECG abnormalities [*n* (%)]	
Left ventricular hypertrophy	28 (28.0)
Arrhythmia	13 (13.0)
Bundle branch block	11 (11.0)
Ischemia	8 (8.0)
Medications for HF [*n* (%)]	
Angiotensin-converting enzyme inhibitors	90 (90.0)
Diuretics	62 (62.0)
Digitalis	82 (82.0)
Calcium channel antagonists	72 (72.0)