Original article

Associated factors with psychological distress in Moroccan breast cancer patients: A cross-sectional study

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ABSTRACT

Objectives: To estimate the prevalence of psychological distress (PD) in Moroccan breast cancer patients, and to determine clinical and social demographic factors associated with PD.

Methods: It was a cross-sectional study where we included all female breast cancer patients that did not have other malignancies. Judgment criteria were based on the Hospital Anxiety and Depression Scale (HADS), and the Distress Thermometer (DT). Threshold values of 15 and 3 were fixed to detect patients on PD by the HADS and the DT, respectively. We analyzed data by calculation of Cronbach's alpha co-efficient for the reliability of measurements, and by simple and multiple logistic regressions.

Results: 446 women were enrolled. Cronbach's alpha coefficient was 0.801, 0.669 and 0.639 respectively for the HADS, HAD-A and HAD-D questionnaires. 120 patients (26.9%) had a HADS global score $\geq$15. HAD-A and HAD-D sub-scores were $\geq$11 in 25 (5.6%) and 30 (6.7%) patients respectively. In multivariate analysis, adjusted for the education level, marital status, taking analgesic and/or anxiolytic treatment, and current treatment type; we found that the occurrence of a distant metastasis [OR = 14.427 p < 0.001], lack of social family support [OR = 4.631 p < 0.001], living a difficult emotional [OR = 2533 p = 0.034] and/or financial [OR = 2.09 p = 0.037] situation, and younger (<50 years) age [OR = 2.398 p = 0.002], were independent associated factors with PD as assessed by the HADS.

Conclusions: Social family support, emotional and financial difficulties should be investigated in all Moroccan breast cancer patients, especially among younger ones, in order to detect those at risk of PD and offer them appropriate support.

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1. Introduction

Living with chronic medical conditions is largely associated with psychological disorders, and cancer is a typical example of increased need for psychological support [1,2].

The term "distress" was defined by the US National Cancer Center Network (NCCN) as a multifactorial unpleasant emotional experience of a psychological (cognitive, behavioral, emotional), social, and/or spiritual nature that may interfere with the ability to cope effectively with cancer, its physical symptoms and its treatment. Distress extends along a continuum, ranging from common normal feelings of vulnerability, sadness, and fears to problems that can become disabling, such as depression, anxiety, panic, social isolation, and existential and spiritual crisis [3].

Cancer is percieved by the patient as a serious lifethreatening disease, and even as a deadly illness without a specific treatment, which has an effect on his psychological and physiological states [1]. Understanding how these consequences interfere with the daily life and well-being of cancer patients is becoming an issue of growing concern, not only for the patients themselves and their families, but also for caregivers and policy makers in the hope of promoting the management strategies and the quality of care in oncology.

Based on this conviction, several studies have been conducted using a variety of assessment methods to demonstrate the high levels of depression and anxiety in cancer patients. But it was observed that, even in large studies based on standardized psychiatric questionnaires, the prevalence rates of depressive and anxious disorders in cancer patients varied widely from 1% to 58% [4—6].

In recent decades, the incidence of breast cancer and the chances of survival have risen, and increasing numbers of survivors are living with the psychological reactions to the disease, its treatment and its effects on their daily lives [7]. Moreover, they must deal with the alterations to bodily appearance, changes in social roles and functioning, and declining health for some of them in metastatic stages.

However, in our daily practice, we note that the intensity of this trauma is not the same from one woman to another. Consequently many questions arise as to the proportion and the caracterics of breast cancer patients that are at risk of developing psychological distress (PD), thus requiring special assistance. Otherwise, PD would cause non-adherence and noncompliance to cancer treatment, what will increase cancer morbidity and mortality [8,9].

It was reported that for low-income southeast asian countries, health policy priorities are much more directed towards the accessibility of patients to anticancer treatments, while the psychological component of care is often overlooked in management strategies [10]. Living standards in the countries where this latest study is not far from that found in Morocco [11]. And also in our context we note the small number of studies that have examined the psychological profile of cancer patients. To our knowledge, and to date, there is no published study specifically devoted to PD in North African breast cancer patients. In a study reported by Manoudi et al., evaluation of depressive disorders was performed in 100 Moroccan cancer patients, 31 of them had breast cancer [12]. Another study has involved 105 Moroccan breast cancer patients but to evaluate quality of life, not PD [13].

This work aimed to estimate PD prevalence in a Moroccan sample of female breast cancer patients, already treated or undergoing treatment at the time of the study, in the University Mohammed V in Rabat. We particularly aimed to determine major associated factors with PD related to the Moroccan population.

2. Methods

2.1. Patients' selection

It was a cross-sectional observational study, conducted from May 2, 2013 until September 30, 2014 in the Radiotherapy department and the Gynecologic and Breast Center of the National Institute of Oncology − Mohammed V University in Rabat.

Inclusion criteria were limited to female gender and a histological confirmation of breast cancer, regardless of histological type, disease stage or treatment type received during the study, there was also no age-limitation. Exclusion criteria were male gender, and the presence of another synchronous or metachronous malignancy. Patients with bilateral breast cancer and those with cerebral metastasis were also not included.

Patients had to express their agreement to participate in the study by signing an informed consent. They were interviewed either during treatment (surgery, chemotherapy, radiotherapy or endocrine therapy) or during the post-treatment follow-up. All patients had a singular interview with their physician, and it was ensured that each patient was assessed only once.

The main variables identified were age, educational level, marital status, residency, occupation, difficult emotional or financial or professional situation (defined by literally direct questions to estimate emotional and professional difficulties, and based on household income and social insurance scheme to determine financial difficulties), social family support (defined by literally direct question about family assistance at home and accompanying in the hospital), current treatment type at the time of the study, taking analgesic or anxiolytic drugs, and the occurrence of a disease aggravation (locoregional recurrence or distant metastasis).

2.2. Judgment criteria

To assess psychological status of our patients we used two tools, both were given to each patient:

- The Hospital Anxiety and Depression Scale (HADS), developed in English by Zigmond & al. in 1983 [14] then translated and validated in Arabic in 1991 by Malasi & al [15]. For illiterate patients, the physician read each question and its answer probabilities, and then he ticked the selected answer. An overall score greater than or equal to15 allows to classify the patient in PD, and 11 is the HAD-A and HAD-D subscore threshold for anxiety and depression, respectively.
- The Distress Thermometer (DT), developed in 1998 by Roth et al. [16]. The accuracy of the measurement is to the nearest millimeter, and the score is expressed in centimeters. The threshold value to define a PD is a score greater than or equal to 3.

2.3. Statistical analysis

Statistical analysis was performed using SPSS software for Windows. Cronbach's alpha coefficient was calculated for the 14 items of the HADS questionnaire and for each subscale (HAD-A and HAD-D) to measure questionnaire internal consistency and reliability. Distribution normality was assessed by Kolmogorov-Smirnov Test for quantitative variables (age, scores). The different modalities of each variable were compared regarding HADS, HAD-A, HAD-D and DT scores. Student's *t*-test was used to compare the result score in different categories of age (below or above 50 years), residency, occupation, difficult situation, social family support and drug intake (analgesic or anxiolytic drugs). ANOVA with Bonferroni post-hoc correction (when applicable) was used to compare scores between categories of educational level, marital status, current treatment type at the time of the study, and the occurrence of a disease aggravation. Chi-square test was used to compare scores regarding the type of surgery (radical mastectomy or conservative procedure), and being or not in metastatic stage. Subgroup analysis was performed for multimodality variables. The relationship between all the above-mentioned independent variables and PD was analyzed by simple logistic regression. To achieve this we considered the PD as a binary variable depending on whether the score was less than or greater than 15 and 3 for the HADS and the DT, respectively. We fixed a significance threshold of 0.20 in univariate analysis to include variables in the multivariate model where multiple logistic regression was performed. The error risk α was set at 0.05 to assess result statistical significance.

3. Results

446 women were enrolled; the population was relatively young with a mean age of 50 ± 8 years [ranges 26—66]. 34% of patients were illiterate even if just 30% lived in rural areas, just 6% were divorced and 25% of these said it was caused by the disease. 21.8% (n = 97) were employed, most of these claimed having workstation reassignment after cancer diagnosis.

10% (n = 43) experienced disease aggravation (loco regional or