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Depression, anxiety, quality of life, and predictors of depressive disorders in caregivers of patients with head and neck cancer: A six-month follow-up study

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ABSTRACT

Objective: Caregivers of patients with cancer experience a variety of psychological distress. This study aimed to investigate the mental health status and depressive disorder predictors in caregivers of patients with head and neck cancer (HNC) over a six-month follow-up.

Methods: We recruited the participants for this study from a HNC outpatient clinic in a medical center from February 2012 to January 2013. Caregivers of HNC patients were evaluated with the Structured Clinical Interview for the DSM-IV, Clinician Version, the Hospital Anxiety and Depression Scale, the Short Form 36 Health Survey (SF-36), and the Family APGAR index. Baseline evaluations were performed, and additional evaluations were performed again 3 months and 6 months later.

Results: We assessed a total of 132 caregivers in this study. Over the 6-month follow-up period, the severity of the caregivers' depression and anxiety significantly decreased, while their quality of life improved significantly. At the 6-month assessment, the most prevalent psychiatric disorders were depressive disorders (12.9%), followed by alcohol abuse (1.5%) and primary insomnia (1.5%). Older age, hypnotics use, pre-existing depressive disorders at baseline, and a lower mental component of SF-36 score at baseline were found to significantly predict depressive disorders after 6 months.

Conclusion: Our findings show that the mental health of caregivers of HNC patients improves during the 6-month follow-up, as well as that depressive disorders were the most prevalent psychiatric diagnosis. Clinicians need to be alert to and manage any emerging mental health problems in caregivers during patient care, especially depressive disorders.

1. Introduction

Around the world, head and neck cancer (HNC) is the seventh most common cancer and the ninth most frequent cause of cancer deaths, with approximately 300,000 deaths every year [1]. Depressive disorders include major depressive disorder, dysthymic disorder, and depressive disorder not otherwise specified on DSM-IV classification [1]. Among these depressive disorders, one of the most distressing is major depressive disorder, which presents with depressed mood,

decreased interest, poor appetite, insomnia, cognitive impairment, pessimistic thinking, and even suicidal ideas/attempts [2]. Caregivers of patients with cancer may suffer from psychological distress or depressive disorders related to the chronic burden of caring for the patient's physical condition or mood changes [3].

Previous studies have indicated that the prevalence of depressive disorders in cancer caregivers varied from 4.5% to 82.2% [4–6]. Most of these studies applied self-rated questionnaires to obtain their results. However, studies have rarely investigated the morbidity of depressive

disorders in caregivers of patients with HNC, with one study observing a prevalence of 9.7% [4]. More recently, we used a structured clinical interview in a cross-sectional study and obtained a point prevalence of 14.7% of depressive disorders in caregivers of patients with HNC [7].

Other studies have previously detected specific risk factors for depressive disorders in caregivers of patients with cancer, including a past history of depression, advanced cancer stage of the patients, a younger age, being female, lower educational levels, poor family support, and impaired social functioning [8–10]. Our previous study demonstrated that risk factors of depressive disorders in cancer caregivers include unemployment, a lower level of social functioning, and a past history of depression [7]. Since most studies so far have been conducted using a cross-sectional design, "actual" risk factors must be examined using a prospective study design. Therefore, the aim of this follow-up study was to further analyze these risk factors of depressive disorder in cancer caregivers.

Caregivers of patients with various cancers not only have depression distress but are also significantly affected by anxiety [7]. Studies have shown that a large percentage of HNC caregivers experience high levels of anxiety symptoms compared to the general population and even HNC patients themselves [7]. For example, Vickery conducted a study of HNC patients and their partners and found that the partners had more severe anxiety symptoms than the patients [7]. However, very few prospective studies have detected an anxiety change in HNC caregivers.

Several authors have reported the impact on the quality of life (QOL) of caregivers of HNC patients [4,11]. Furthermore, some cross-sectional studies have confirmed the correlation between depression and QOL in these caregivers [4,7]. Based on literatures review, studies focusing on the correlation between anxiety and QOL of caregivers of patients with cancer are relatively rare [6]. A study of 897 cancer family caregivers from Korea found that the QOL of caregivers is closely related to their anxiety [6]. Longitudinal follow-up studies on depression, anxiety, and QOL and their relationship to caregivers of HNC patients are required.

Previous studies have explored psychological health (including anxiety and depressive symptoms) of HNC caregivers, as well as the factors associated with deficits in psychological health among HNC caregivers [6]. Such associated factors include sociodemographic factors [6], time since patient diagnosis [6], hours of care [6], lifestyle modifications [6], patient needs and treatment-related factors [6], and cancer recurrence [6]. Despite the aforementioned studies published on HNC caregivers, prospective studies about depressive disorder morbidity and risk factors among caregivers of patients with HNC by using a clinician's structured interview are scant, so observations about changes in depression, anxiety, and QOL over the period of patient care are limited. The present study aims to do the following: (1) explore the change in mood (depression and anxiety symptoms) and quality of life in caregivers of patients with HNC for 6 months and (2) examine the prevalence and risk factors of depressive disorders among caregivers of patients with HNC after 6 months of follow-up.

2. Methods

2.1. Subjects

This was a prospective study with a consecutive sampling design. We recruited subjects from the outpatient combined clinic for HNC in a medical center in southern Taiwan, which provides services to 5000 cancer patients annually, from February 2012 to January 2013. The inclusion criteria for the caregivers consisted of: (1) taking care of patients with newly diagnosed, untreated HNC; (2) aged 20 years or over; (3) living with the patients and taking care of their daily needs; and (4) having the ability to verbalize and write. The exclusion criteria for the patients consisted of: (1) a previous history of malignancy or (2) recurrent HNC, while caregivers were excluded if they had a previous history of malignancy.

2.2. Procedures

We obtained ethical approval from the Chang Gung Memorial Hospital's human research ethics committee. We adhered to the following procedure for this study: (1) patients and their caregivers referred from the HNC outpatient clinic were asked to sign the written informed consent form. Caregivers were identified by a case manager at the outpatient clinic by checking their ID cards; (2) caregivers attended the appointment with the patients and were confirmed to meet the inclusion criteria; (3) a senior psychiatrist (Dr. Y. Lee) applied the SCID to reach a psychiatric diagnosis; (4) a trained research assistant collected the patients' demographic and clinical data, the caregivers' demographic data, and clinical rating scales data, including the Hospital Anxiety and Depression Scale (HADS), the Short Form 36 Health Survey (SF-36), and the Family APGAR index through a face-to-face interview and reading out questions; (5) the above questionnaires and psychiatric diagnostic interviews were completed before treatment, at the 3-month follow-up, and at the 6-month follow-up.

2.3. Assessments

2.3.1. Structured Clinical Interview for DSM-IV, Clinician Version (SCID-CV)

Psychiatric diagnoses were made using the SCID-CV interview, a structured diagnostic interview based on DSM-IV criteria [12]. This tool was designed to be administered by a clinician or mental health professional that has undergone the relevant professional training. The diagnosis was supplemented by the DSM-IV criteria for primary insomnia (which was not included in the SCID). A trained psychiatrist conducting the SCID interview is considered a "gold standard" of psychiatric diagnosis.

2.3.2. The Hospital Anxiety and Depression Scale (HADS)

The HADS is a 14-item self-administered questionnaire used to assess the severity of anxiety and depression symptoms [13]. The HADS is commonly used in hospital (including patients with cancer) and primary care practices, as well as for the general population [14]. Seven items assess anxiety, and the remaining seven items assess depression. Each item has four possible responses (scored 0–3), and the anxiety (HADS-A) and depression (HADS-D) subscales feature independent measures [13].

2.3.3. The Short Form 36 Health Survey (SF-36)

The Short Form 36 Health Survey (SF-36) was designed to assess functional health, well-being, and QOL in population surveys [15]. The SF-36 is composed of eight health domains: physical functioning, role limitations due to physical problems, bodily pain, general health, vitality, social functioning, role limitations due to emotional problems, and mental health. A standard scoring algorithm combines scores into two summary scores for the physical component summary (PCS) and the mental component summary (MCS) [16]. The Taiwan version of the SF-36 has been validated by Lu et al. [17] and has been widely used to measure QOL in various studies in Taiwan, as well as other Asian countries [18]. The SF-36 has been applied to measure QOL in studies about cancer caregivers [19,20]. In the present study, a trained research assistant performed the SF-36.

2.3.4. Family APGAR index

The Family APGAR index was developed by Smilkstein (1987) to determine a family member's perception of family functioning and family support by examining his/her satisfaction with family relationships [21]. It is composed of the following five parameters: adaptation, partnership, growth, affection, and resolution, and uses a three-point scale ranging from 0 (hardly ever) to 2 (almost always). The total score can range from 0 to 10, with higher scores representing higher levels of family functioning and family support.