

ASSESSMENT OF IMPACT OF HEPATOCELLULAR CARCINOMA ON HEALTH RELATED QUALITY OF LIFE

Thesis

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SUMMARY

HCC has a great and potentially adverse impact on physical health and psychological well-being, and breaks the pattern of a patient's life. In addition to medical treatment and physical factors, psychosocial variables also play an important role in determining *HRQoL*.

Because HCC has its specific etiologies, epidemiology, clinical problems, treatments, and disease progression, generic plus disease-specific measures are essential to provide a comprehensive picture of *HRQoL*.

Compromised *HRQoL* has been shown in patients with liver disease including cirrhosis. *HRQoL* increasingly is considered an important end point in cancer clinical trials and clinical care, along with the traditional end points such as tumor response rate. *HRQoL* concerns in patients with HCC include generic domains, such as physical symptoms and psychological issues.

To our knowledge, none of the available Egyptian studies had assessed the effect of HCC on the health-related quality of life (*HRQoL*).

The aim of the current study was to assess the effect of hepatocellular carcinoma on the health-related quality of life (*HRQoL*), as well as to assess the effect of locoregional

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LIST OF ABBREVIATIONS

Abbrev	Full term
AASLD	American Association For The Study of Liver disease
AFP	Alpha Feto Protein
BCLC	Barcelona Clinic Liver Cancer
CLD	Chronic liver disease
CLDQ	Chronic Liver Disease Questionnaire
CT	Computerized Tomography
DNA	Deoxy Ribo Nucleic Acid
EASL	European Association for the Study of the Liver
HBV	Hepatitis B virus
HCC	Hepatocellular carcinoma
HCV	Hepatitis C virus
HQLQ	Hepatitis Quality of Life Questionnaire
HRQoL	Health-related quality of life
LDQOL	Liver Disease Quality Of Life
MECC	Middle East Cancer Consortium
MRI	Magnetic resonance imaging
OLT	Orthotopic liver transplantation
PAT	Parenteral antischistosomal treatment
PDGFR-β	Platelet-derived growth factor receptor beta
PEI	Percutaneous ethanol injection
PEIT	Percutaneous ethanol injection therapy
RCT	Randomized controlled trial
RFA	Radiofrequency ablation
SF-36	Short Form-36
TACE	Transcatheter arterial chemoembolization
TAE	Trans-Arterial Embolization
TOCE	Transarterial oil-based chemoembolization
UCSF	University of California at San Francisco
US	Ultrasonography
VEGF	Vascular endothelial growth factor
VEGFRs	Vascular endothelial growth factor receptors

INTRODUCTION

The main goals of the health care system for patients with chronic diseases are to prevent additional ill health and to facilitate a life without compromised activities of daily living. An important part of treatment is to improve Health-related quality of life (HRQoL) and to support the ability to cope with stressors related to disease (*Mittermaier et al., 2004*).

The concept HRQoL is subjective and multi-dimensional and incorporates physical, emotional, and social aspects of health perception and health functioning (*Larsson et al., 2008*). Standardized assessment of HRQoL preceding each consultation may potentially provide physicians with valuable information (*Gutting et al., 2008*).

Among patients with chronic liver disease, impairment in HRQoL has been reported. Hepatocellular carcinoma (HCC), one of the major sequelae of chronic liver diseases, is now increasing worldwide and the HRQoL of patients with HCC is an area of interest (*Kondo et al., 2007*).

Owing to recent advances in diagnostic imaging and availability of tumor biomarkers specific to HCC, the cancer can now often be detected at an early stage (*Shiratori et al., 2001*), where there are presumably no specific symptoms associated with HCC. The impact of these small HCC on HRQOL remains uncertain (*Kondo et al., 2007*).

In the past two decades, percutaneous tumor ablation techniques, such as percutaneous ethanol injection therapy (PEIT) and radiofrequency ablation (RFA), have been accepted as effective and safe therapies for patients with small HCC who are not candidates for hepatic resection (*Shiina et al., 2005*). These less-invasive therapies may be preferable from the viewpoint of patients' HRQoL, especially because of the high recurrence rate of HCC even after complete tumor removal, which requires repeated treatment of each recurrence (*Koike et al., 2000*).

In medical practice, the preferences between different kinds of treatment or follow-up can be better investigated with the application of HRQoL. Furthermore, it can influence and aid the choice of therapeutic management for a specific disease, motivating the patient to take part in decisions that are in his/her own interest, through language that can be readily understood. In public health, these studies can favor better use of resources allocated to the health sector (*Carr and Higginson, 2001*).

Generic instruments are widely used, can be universally applied and allow comparisons of different diseases or populations. A generic instrument should be chosen when a healthy control group is used or when making a comparison with other diseases. Generic instruments, however, have a number of limitations, of which the most important is that they do not allow specific aspects of a disease to be studied (*Chen et al., 2005*).

For this reason, Specific Instruments for assessing HRQoL are being increasingly developed and used. These instruments can be specific to a certain disease (e.g., diabetes, asthma or liver diseases), be applied to a particular population of patients (e.g., elderly patients) or be specific to a function (e.g., functional capacity or sexual function). Specific instruments are more comprehensive and capture all the possible changes that can occur during the course of a disease (*Strauss and Teixeira, 2006*).

They are also better able to detect improvements or deterioration related to aspects under investigation and have proved very useful in evaluating therapies in clinical trials. There are some questionnaires available regarding liver disease as Chronic Liver Disease Questionnaire (CLDQ) (*Gralnek et al., 2000*). Liver Disease Quality Of Life (LDQOL) and Hepatitis Quality of Life Questionnaire (HQLQ) (*Strauss and Teixeira, 2006*).

The Short Form-36 (SF-36) health survey is a generic health status measurement consisting of 36 items in eight domains, which has demonstrated good reliability and validity in chronic disease populations, including patients with chronic liver diseases (*Kondo et al., 2007*).

In clinical practice, HRQoL prediction from objective variables is necessary and may be useful. For that purpose, the relationship between subjective HRQoL scores and objective clinical variables, such as presence of ascites, status of HCC and laboratory data, should be analyzed further (*Kondo et al., 2007*).

AIM OF THE WORK

The aims of this study were to:

- 1- Assess the effect of hepatocellular carcinoma on the health-related quality of life (HRQoL).
- 2- Assess the effect of locoregional therapy of hepatocellular carcinoma on the health-related quality of life (HRQoL).