Health Related Quality of Life Assessment in Egyptian Recipients after Living Donor Liver Transplantation

Thesis

Submitted for partial fulfillment of Master Degree in ***Tropical Medicine***

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2015

Acknowledgement

*First, thanks are all due to **Allah** for Blessing this work until it has reached its end, as a part of his generous help throughout our life.*

*I would like to express my deep appreciation to **Prof. Dr. Eman Mohamed El-Said El-Gindy**, Professor of Tropical Medicine, Ain Shams University for her detailed and constructive comments, professional guidance and for her valuable support throughout this work.*

*I am deeply grateful to, **Dr. Iman Mohamed Fawzy Montasser,** Lecturer of Tropical Medicine, Ain Shams University. I am indebted to her constructive criticism and continuous unlimited help and for giving me the privilege to work under her supervision. I appreciate her active participation in providing me with a lot of knowledge.*

*I would like to express my deep appreciation to, **Dr. Reem El-Sayed Mohamed Hashem**, Lecturer of Psychiatry, Ain Shams University, for her faith in my ability, her scientific help, meticulous supervision and constructive criticism which helped me to accomplish this work.*

I would like to express my deepest thanks to all patients and all the staff members in Ain Shams Center of Organ Transplantation in Ain Shams Specialized Hospital for their help and cooperation to accomplish this work. Last but not least, I would like to express my gratitude and appreciation to all those who helped me directly or indirectly in accomplishing this work.

Contents

List of Abbreviations

AIH	:	Autoimmune Hepatitis
ALT	:	Alanine Transferase
AST	:	Aspartate Transferase
BDI	:	Beck Depression Inventory
CMV	:	Cytomegalovirus
CNI	:	Calcineurin Inhibitor
CTP	:	Child-Turcotte-Pugh
DM	:	Diabetes Mellitus
ESLD	:	End Stage Liver Disease
HBIg	:	Hepatitis B Immune globulin
HBV	:	Hepatitis B Virus
HCC	:	Hepato Cellular Carcinoma
HCV	:	Hepatitis C Virus
HIV	:	Human Immunodeficiency Virus
HRQOL	:	Health-Related Quality of Life
INR	:	International Normalizing Ratio
LDLT	:	Living Donor Liver Transplantation
LT	:	Liver Transplantation
MELD	:	Model for End-Stage Liver Disease
OLT	:	Orthotopic Liver Transplantation
PBC	:	Primary Biliary Cirrhosis
PROMIS	:	Patient-Reported Outcomes Measurement Information System

List of Abbreviations (Cont.)

PSC	:	Primary Sclerosing Cholangitis
PVT	:	Portal Vein Thrombosis.
QOL	:	Quality of Life
SF-36	:	Short Form-36
SPSS	:	Statistical Package for Social Sciences
UNOS	:	United Network for Organ Sharing
WHO	:	World Health Organization

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Introduction

Liver transplantation has emerged over the past several decades as a viable treatment option for patients with acute liver failure and end stage liver disease. Initial progress and growth were limited by technical difficulties and an inherent learning curve in the management of patients in the post-transplantation period. Improvements in transplantation outcomes have yielded a greater treatment demand and a new challenge, organ shortage ***(Dove and Brown, 2012).***

Although liver transplantation has proven to be a great success in a relatively short period of development, it should not be considered as either the initial or primary treatment modality for most liver diseases. Other than in a few specific disorders (e.g amyloidosis, hyperoxaluria, urea cycle defects and disorders of branched chain amino acids) , transplantation is a therapy for disease complications rather than of the primary illness ***(Dove and Brown, 2012).***

Thus, the selection of a transplant candidate is a risk-benefit analysis, in which the inherent risks of surgery, recurrent disease, and long-term immunosuppression must be weighed against the potential benefits of transplantation. These benefits differ for each patient but include improvements in survival, prevention of long-term complications, and better health-related quality of life (HRQOL) ***(Dove and Brown, 2012).***

The most commonly used prognostic model for estimating disease severity and survival is the Model for End – stage Liver Disease (MELD).The MELD score uses a patients laboratory values for serum bilirubin, serum creatinine, and international normalized ratio for prothrombin time (INR) in a log transformed equation to estimate likelihood of three-month survival. Higher MELD scores have been associated with decrease survival rates. Implementation of MELD for organ

allocation has decreased pretransplant mortality without having a negative impact on post transplant mortality ***(Kiran and Patrick, 2012)***.

An understanding of the issues pertaining to quality of life is essential for any disease or health condition. It is particularly important in orthotopic liver transplantation (OLT) recipients. Health-related quality of life (HRQOL) is a quantitative conversion of a patient's self–assessment of his or her physical, functional, social, and psychological dimensions of life. It is a mean of studying how a patient perceives his or her health status and other nonmedical aspects of his or her life. As survival times plateau for many chronic diseases, HRQOL is now included in clinical trials as yet another form of medical outcome assessment. HRQOL research presents a challenging goal for clinicians as it is necessary to convert information based on patient self-assessment and subjective reports into a quantitative measurement that can be standardized and applied to large patient populations. In addition, its interventions and outcomes are based on patient–driven objectives, priorities, interpretations, and satisfaction rather than solely physician-based medical objectives and goals such as mortality, morbidity, length of life, and survival rates ***(Bownik and Saab, 2009).***

There are number of tools used to study HRQOL in transplant recipients. These tools are stratified into 2 categories: generic and disease-specific instruments. The SF-36 survey is the most frequently used HRQOL instrument for OLT recipients. Disease-specific instruments are most sensitive in their assessment of the individual effects of a specific disease or disease state, certain impairing characteristics of a disease, or a patient's response to a specific intervention. One of the most recognized instruments used in patients with liver disease is the Chronic Liver Disease Questionnaire (CLDQ) ***(Schulz et al., 2008)***.

Pretransplantation health-related quality of life scores are affected by the etiology of liver cirrhosis, with hepatocellular and cholestatic etiologies having higher HRQOL scores than alcohol or viral hepatitis etiologies. Posttransplantation health-related quality of life scores are not affected by the etiology of the original liver cirrhosis, but transplant recipient scores continue to remain significantly lower than those of healthy controls ***(Bownik and Saab, 2009).***

During the first 6 months after liver transplantation, the majority of physical and mental components of health-related quality of life scores improve, but these increases are not sustained in the long term. Hepatitis C as an indication for liver transplantation is an independent factor in decreasing posttransplantaion health-related quality of life scores ***(Bownik and Saab, 2009).***

Established evidence shows that a high level of post liver transplantation anxiety is harmful in the long term to the well-being of the recipients ***(Pérez-San-Gregorio et al., 2006),*** and depressive symptoms after liver transplantation are associated with an increased risk of long-term mortality ***(Corruble et al., 2011).*** As a result, longitudinal studies and prolonged follow – up are required to disclose other possible factors that might undermine the psychological health of recipients ***(Corruble et al., 2011).***

Aim of the Work

This Study Aims to Evaluate:-

1- Quality of life after LDLT in Egyptian recipients using short form 36 (SF-36) score.

2- Impact of post transplant medical and psychiatric complications on quality of life.

Chapter (I)

End Stage Liver Disease

Cirrhosis represents a late stage of progressive hepatic fibrosis characterized by distortion of the hepatic architecture and the formation of regenerative nodules. It is generally considered to be irreversible in its advanced stages at which point the only option may be liver transplantation. In earlier stages, specific treatments aimed at the underlying cause of liver disease can improve or even reverse cirrhosis ***(Iwaisako et al., 2012).***

Patients with cirrhosis are susceptible to a variety of complications and their life expectancy can be markedly reduced. Cirrhosis accounted for approximately 49,500 deaths and was the eighth leading cause of death in the United States in 2010 . In addition, there were an estimated 19,500 deaths due to liver cancer, which often occurs in the setting of cirrhosis. Similarly, a study that used data from the National Death Index from the Centers for Disease Control and Prevention and the Rochester Epidemiology Project estimated that liver disease was responsible for 66,007 deaths in 2008, of which 18,175 were due to hepatobiliary cancer ***(Asrani et al., 2013).***

Major Complications: Major complications of cirrhosis include (table 1):