

POSTOPERATIVE 30 DAY FOLLOW UP OF LIVING DONOR LIVER TRANSPLANTATION (LDLT) RECEPIENTS; A MULTI-CENTER STUDY

Thesis submitted for partial fulfillment of master degree in Critical
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By

Khalid Mohammad Atef Omar

M.B.B.Ch.

Faculty of Medicine, Cairo University

Under Supervision of:

Ahmed H. Mowafi, MD

Assistant Professor of Critical Care Medicine
Critical care department
Cairo University

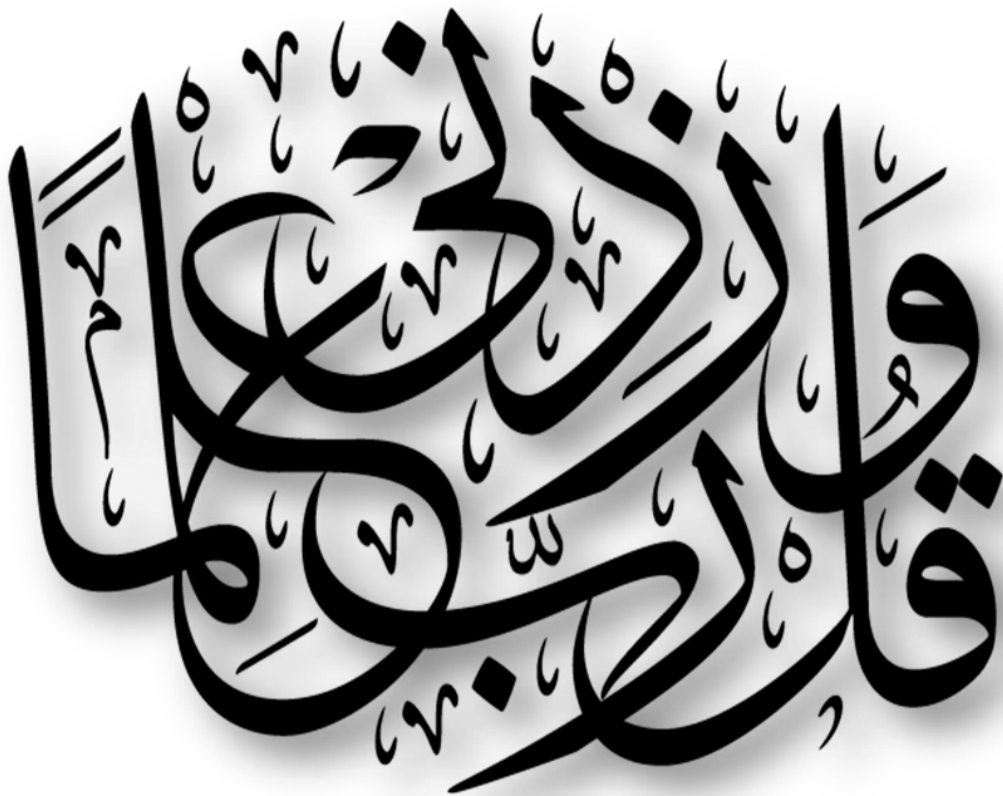
Ahmed A. Battah, MD

Assistant Professor of Critical Care Medicine
Critical care department
Cairo University

Yasser S. Nassar, MD

Lecturer of Critical Care Medicine
Critical care department
Cairo University

Faculty of Medicine
Cairo University
2012



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Abstract

Background: Living donor liver transplantation has emerged as a surgical technical achievement designed to increase the organ supply. Adult recipients have a wide range of disease severity and higher incidence of medical comorbidities, in addition, the use of a partial graft in an adult recipient predisposes the recipient to a unique set of potential technical and anatomic complications that are not prevalent in whole deceased donor grafts. ^[1]

Objectives: Careful analysis of variables that affect early graft outcome in LDLT is necessary to determine methods that may be manipulated to improve outcome.

Methods: A retrospective study involving 142 patients that underwent LDLT in two centers, International Medical Center “IMC” 113 cases and Kasr Elini hospital 29 cases, in the period from October 2004 to December 2010, were recruited in the study. Post-operative daily assessment was done, by recoding and following up all the clinical laboratory and radiological data, for a period of 30 days.

Results: The survival rate at the end of our study was 86.62%. The most frequent complications were renal complications (86.6%), pulmonary complications (73.9%), neurological complications (14 %), cardiovascular complications (12.6 %), infection (13.3%), intra-abdominal infections (10.5%) and immunosuppressant toxicity (7.7%).

Conclusion: LDLT is a major procedure that requires gathered efforts from members of the transplantation team considering all the events of the preoperative and intraoperative period as well as the scoring system, MELD score, to plan postoperative management and to identify potential complications early. This may help in proper management of the recipient.

Key words: Living Donor liver Transplantation – MELD score – post LDLT complications – graft failure.

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List of abbreviations

Abbrev.	Meaning
AIDS.	Acquired immuno-defecency syndrome
ALA	Antilymphocyte antibodies
Alb	Albumin
ALF	Acute liver failure
ALP	Alkaline phosphatase
ALT	Alanine aminotransferase
ANOVA	Analysis of variance test
AOCLD	Acute on chronic liver disease
ARDS	Adult respiratory distress syndrome
ARE	Acute rejection episode
AST	Aspartate aminotransferase
ATN	Acute tubular necrosis
B/B	Bad-to-bad group
B/G	Bad-to-good group
BE	Base excess
BP	Blood pressure
BUN	Blood urea nitrogen
Ca	Calcium
CBC	Complete blood count
CD	Cluster Of Differentiation
CEA	Carcino-embryonic antigen
CH	Cerebral herniation
CI	Cardiac index
CMV	Cytomegalo virus
Creat	Creatinine
CRP	C reactive protein
CT	Computed tomography
CTP	Child-Turcotte-Pugh
CVP	Central venous pressure
DBil	Direct bilirubin
DBP	Diastolic Blood Pressure
EBV	Epstein-Barr virus
ECG	Electrocardiography
EDHS	Egyptian Demographic Health Survey
EEG	Electroencephalography
ERCP	Endoscopic retrograde cholangio-pancreatography
ESLD	End-stage liver disease
ESR	Erythrocyte sedimentation rate
FBS	Fasting blood sugar
Fe	Ferrous
FFP	Fresh frozen plasma

FHF	Fulminant hepatic failure
FK	Tacrolimus
G/B	Good-to-bad group
g/dL	Gram per diciliter
G/G	Good-to-good group
GGT	Gamma glutryl transaminase
GI	Gastrointestinal
GIT	Gastro intestinal tract
GVHD	Graft versus host disease
HAT	Hepatic artery thrombosis
HAV	Hepatitis A virus
Hb	Hemoglobin
HBV	Hepatitis B virus
HCC	Hepatocellular carcinoma
Hct	Hematocrit
HCV	Hepatitis C virus
HE	Hepatic encephalopathy
HIV	Human immune-deficiency virus
HR	Heart Rate
IAI	Intra-abdominal infections
ICU	Intensive care unit
IL-2	Interleukin-2
IMC	International Medical Center
INR	International normalized ratio
IPGF	The Initial poor graft function
IV	Intravenous
K	Potassium
LDH	Lactate dehydrogenase enzyme
LDLT	Live-donor liver transplantation
LMWH	Low Molecular Weight Heparin
log _e	Logarthym
LT	Liver transplantation
Lt dr Bil	Left drain bilirubin
Lt dr Hct	Left drain Hct
MAP	Mean arterial pressure
MELD	Model for End-stage Liver Disease
mg/dL	Miligram per diciliter
mm Hg	Milimeter mercury
MMF	Mycophenolate mofetil
MRA	Magnetic resonance angiography
MRCP	Magnetic resonance cholangio-pancreatography
MRI	Magnetic resonance imaging
Na	NATRIEUM
NPV	Negative Predictive value
OKT3	Brand Name For Muromonab-Cd3, An Immunosuppressant Drug

	(Monoclonal Antibodies)
OLT	Orthotopic liver transplantation
PAP	Pulmonary artery pressure
PCWP	Pulmonary capillary wedge pressure
PELD	Pediatric End-stage Liver Disease
pH	Is a measure of the acidity or basicity of an aqueous solution
PLOS	Prolonged length of stay
Plt	Platelets
PPV	Positive Predictive value
PT	Prothrombin time
PTLD	Post-transplant lympho-proliferative disorder
PTT	partial thromboplastin time
PVRI	pulmonary vascular resistance index
PVT	portal vein thrombosis
ROC	Receiver Operating Characteristic curve analysis
Rt dr Bil	Right drain bilirubin
Rt dr Hct	Right drain Hct
RV	Right ventricle
SBP	Systolic blood pressure
SD	Standard Deviation
SE	Standard Error
SICU	Surgical intensive care unit
SPSS	Is A Statistical Program
SVR	Systemic vascular resistance
SVRI	Systemic vascular resistance index
T.Prot	Total protein
TBil	Total bilirubin
Temp	Temperature
TG	Triglyceride
TIBC	Total iron binding capacity
TIPS	Transjugular intrahepatic portosystemic shunt
TLC	Total leukocytic count
TPN	Total parenteral nutrition
UCSF	University of California, San Francisco
UNOS	United Network of Organ Sharing
vs	VERSUS
wk	Week

|

INTRODUCTION

AND

AIM OF THE WORK

INTRODUCTION:

Egypt has the largest epidemic of hepatitis C virus (HCV) in the world, according to the Egyptian Demographic Health Survey [EDHS], in 2009. The overall prevalence (percentage of people) positive for antibody to HCV was 14.7%, meaning that nine to eleven million Egyptians, have been exposed to hepatitis C, of which approximately 7.5 million are chronic carriers. In some rural areas over half the adult population carries HCV antibodies.^[1] About 30 % of people infected with HCV spontaneously clear the virus from their system within six months, according to studies done in Egypt. The rest develop chronic hepatitis, which in about 25% of cases leads to cirrhosis and liver failure in 20 to 30 years.^[1]

Without liver transplantation the prognosis for fulminant hepatic failure is extremely poor. Liver failure can be either acute (fulminant or subfulminant failure) or chronic (decompensated cirrhosis). Each disease entity presents unique features with important differences between the two entities. In the pretransplantation era, liver failure was nearly universally fatal, with mortality from fulminant hepatic failure of 80% to 90%, and 1-year mortality in decompensated cirrhosis of more than 50%. In contrast, liver transplantation patient survival is presently more than 85% at 1 year and more than 70% at 5 years, emphasizing the clinical benefit of liver transplantation for either acute or chronic liver failure. Both split-liver and live-donor liver transplantation (LDLT) offer additional hope to patients with liver failure in the presence of an ever-growing cadaveric organ shortage.^[2]

A shortage of cadaver donors has resulted in some patients dying while waiting for a suitable donor. Another concern in our country is that cadaveric liver transplantation is still hindered by medico-legal and legislative aspects.^[3]