COMPARISON BETWEEN THE RESULTS OF LIVER TRANSPLANTATION FROM LIVING DONORS COMPARED TO CADAVERIC DONORS

Essay

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بسم الله الرحمن الرحيم

﴿ قَالُوا سُبْحَانَكَ لاَ عِلْمَ لَنَا إِلاَّ مَا

عَلَّمْتَنَا إِنَّكَ أَنْتَ العَلِيمُ الحَكِيمُ (32)﴾

صدق الله العظيم

البقرة آية "32"

Dedication

For God whose blessing gave me
The strength to accomplish this work, my parents, wife, daughter and my son whose love and
Encouragement helped me to be the person I am

Ahmed Mohiy El-Din Ahmed Rashwan

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List of Abbreviations

ACR	:	Acute Cellular Rejection.
AFHF	:	Acute Fulminant Hepatic Failure.
ALT	:	Alanine aminotransferase.
ARDS	:	Adult Respiratory Distress Syndrome.
ARE	:	Acute Rejection Episode.
AST	:	Aspartate aminotransferase.
AZA	:	Azathioprine.
BMI	:	Body Mass Index.
CD-CD	:	Choledocho-Choledochostomy.
CD-j	:	Choledocho-Jejunostomy.
CHD	:	Common Hepatic Duct.
CLD	:	Chronic Liver Disease.
CLT	:	Cadaveric Liver Transplantation.
CMV	:	Cytomegalovirus.
CNHBD	:	Controlled Non Heart Beating Donors.
CR	:	Chronic Rejection.
CsA	:	Cyclosporine A.
CT	:	Computed Tomography.
CTP	:	Child- Turcotte- Pugh.

CUSA	:	Cavitron Ultrasonic Surgical Aspirator.
CV	:	Coronary Vein.
CWLT	:	Cadaveric Whole Liver Transplantation.
EAD	:	Early Allograft Dysfunction.
EBV	:	Epstein-Barr virus.
ELTA	:	Egyptian Liver Transplantation Association.
ERCP	:	Endoscopic Retrograde Cholangiopancreatography
ESLD	:	End Stage Liver Disease.
FAP	:	Familial Amyloidotic Polyneuropathy.
FFP	:	Fresh Frozen Plasma.
GGT	:	Gamma-Glutamyl Transferase.
GRWR	:	Graft Volume Recipient Body Weight Ratio.
GSV	:	Great Saphenons Vein.
HAT	:	Hepatic Artery Thrombosis.
HBBDD	:	Heart-Beating, Brain-Dead cadaveric Donors.
HBIG	:	Hepatitis B Immunoglobulin.
HBV	:	Hepatitis B Virus.
HCC	:	Hepatocellular Carcinoma.
HCV	:	Hepatitis C Virus.
HHD	:	High Hilar Dissection.
HIV	:	Human Immunodeficiency Virus.
HRS	:	Hepatic Renal Syndrome.

HSV	:	Herpes Simplex Virus.
HTK	:	Histidine-Tryptophan-Ketoglutarate solution.
ICU	:	Intensive Care Unit.
IFN-α	:	Interferon alpha.
IMV	:	Inferior Mesenteric Vein.
IVC	:	Inferior Vena Cava.
LDLT	:	Living Donor Liver Transplantation.
LHV	:	Left Hepatic Vein.
LPV	:	Left Portal Vein.
LRLT	:	Living Related Liver Transplantation.
LT	:	Liver Transplantation.
MELD	:	Model for End-Stage Liver Disease.
MHV	:	Middle Hepatic Vein.
MMF	:	Mycophenolate Mofetil.
MRI	:	Magnetic Resonance Imaging.
NIH	:	National Institutes of Health.
NSAIDs	:	Non-Steroidal Anti-Inflammatory Drugs.
PBC	:	Primary Biliary Cirrhosis.
PNF	:	Primary Non-Function.
PNFG	:	Primary Non-functioning Graft.
PS	:	Prolene Suture.
PSC	:	Primary Schlerosing Cholangitis.

PVT	:	Portal Vein Thrombosis.
RHV	:	Right Hepatic Vein.
RL	:	Right Lobe.
RLT	:	Reduced Liver Transplantation.
RPV	:	Right Portal Vein.
RYHJ	:	Roux-en-Y Hepaticojejunostomy.
SLV	:	Standard Liver Volume.
SMA	:	Superior Mesenteric Artery.
SMV	:	Superior Mesenteric Vein.
SV	:	Splenic Vein.
TAC	:	Tacrolimus.
TIPS	:	Trans-jugular Intrahepatic Porto systemic Shunt.
UNOS	:	United Network of Organ Sharing.
UW	:	University of Wisconsin.

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Introduction

In 1963, Starzl performed the first human orthotropic liver transplantation, and in 1967 the first successful liver transplantation was done. Since then, liver transplantation started to be thought of as a line of treatment for patients with end-stage liver disease**. (Starzl et al., 1982).**

The main source of donor organs is the brainstem-dead, heart-beating donor. There are few absolute contraindications to organ donation but, with the increasing waiting list mortality and waiting times, donor acceptance criteria have been liberalised and numerous technical variant grafts (reduced liver, split liver, living donor liver, domino liver) have been adopted to reduce this shortfall **(Mehta and Mirza, 2007).**

The goal of liver transplantation is to prolong and improve quality of life in patients with advanced liver diseases (acute or chronic end-stage liver diseases). Selection and timing of referral for evaluation for liver transplantation optimizes outcomes. Patients are listed for transplantation after a complete assessment by a multidisciplinary team. The incidence of postoperative complications is influenced by the quality of the donor liver, technical aspects of the surgery, and recipient factors. Patient survival at one year and five years is 85–90% and

75–80%, respectively; graft survival is 80–85% and 70–75%, respectively. The main factor limiting further growth in liver transplantation worldwide is shortage of donor organs **(Mehta and Mirza, 2007).**

Age , sex , underlying liver disease , hepatitis viral infection (B and C viruses) , immunosuppressive regimen , ABO blood groups and HLA class I and II mismatches have a major impact on the outcome of liver transplantation. **(Hoffman et al, 1995).**

Hepatitis C is among the most common causes of chronic liver disease affecting approximately 1% of the world's population . End-stage hepatitis C Virus (HCV) related chronic liver disease is the leading indication for orthotropic liver transplantation worldwide **. (Strader and Seef , 1996) .**

Hepatitis C virus (HCV) is a leading cause of liver cancer and Egypt has possibly the highest HCV prevalence **(Pybus et al., 2003).**

Patients with chronic hepatitis C do much better following liver transplantation than do patients with chronic hepatitis B . **(Martin et al.,1992) .**

Cadaveric liver transplantation (CLT) (5-year survival >80%) represents the standard of care for end-stage liver disease (ESLD). Because the demand for cadaveric organs exceeds their