



***Recent Advances in postoperative care  
pediatric liver transplantation***



***An Essay***

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Intensive Care Medicine*

*By*

**Khaled Mohamed Salah Eldin Abd elmonem Abdalah**

***M.B. B.Ch, 2005***

***Faculty of Medicine, Ain Shams University***

**Supervised by:**

**Prof. Dr. Seif Elislam Abd Alaziz Shaheen**

**Professor of Anaesthesiology and Intensive Care Medicine**

**Ain-Shams University**

**Dr. Noha Mohamed Elsharnoby**

**Assistant Professor of Anaesthesiology and Intensive Care**

**Medicine, Ain-Shams University**

**Dr. Sherif George Anis**

**Lecturer of Anaesthesiology and Intensive Care Medicine**

**Ain-Shams University**

**Ain-Shams University**

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أحدث الطرق لرعاية ما بعد جراحة

زراعة الكبد في الأطفال

رسالة مقدمة من

الطبيب / خالد محمد صلاح الدين عبد المنعم عبد الله

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تحت إشراف

الأستاذ الدكتور / سيف الاسلام عبد العزيز شاهين

أستاذ التخدير والرعاية المركزة – جامعة عين شمس

الدكتور / نهى محمد الشرنوبى

أستاذ مساعد التخدير والرعاية المركزة – جامعة عين شمس

الدكتور / شريف جورج أنيس

مدرس التخدير والرعاية المركزة – جامعة عين شمس

كلية الطب

جامعة عين شمس

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# CONTENTS

<b>Title</b>	<b>Page</b>
<b>Introduction</b> .....	1
<b>Chapter 1: Anatomical, physiological and pharmacological consideration in pediatric liver transplantation</b> .....	4
<b>Chapter 2: Pathophysiology of liver cell failure in pediatrics</b> .....	34
<b>Chapter 3: pretransplantation care</b> .....	48
<b>Chapter 4: posttransplantation care</b> .....	68
<b>English Summary</b> .....	89
<b>References</b> .....	91
<b>Arabic Summary</b>	



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## ABBREVIATIONS

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<b>99mTC</b>	Technetium-99m
<b>ACR</b>	Acute cellular rejection
<b>ADH</b>	Alcohol dehydrogenase
<b>AD-PKD</b>	Autosomal dominant polycystic kidney disease
<b>AGT</b>	Alanine glycosylate Aminotransferase
<b>AIH</b>	Autoimmune hepatitis
<b>ALP</b>	Alkaline phosphatase
<b>ALT</b>	Alanine aminotransferase
<b>AMA</b>	Antimitochondrial antibody
<b>ANA</b>	Antinuclear antibody
<b>Anti HLA</b>	Anti human leucocyte antigen
<b>ANTI LKM-1</b>	Anti liver kidney microsomal antibody
<b>ANTI SLA</b>	ANTISOLUBLE LIVER ANTIGEN
<b>ANTI-CD25</b>	Anti cluster of differentiation 25
<b>APOLT</b>	Auxiliary partial orthotropic liver transplantation
<b>AST</b>	Aspartate aminotransferase
<b>ATIII</b>	: Antithrombin III
<b>CBD</b>	Common bile duct
<b>CDG</b>	Congenital disorders of glycosylation

<b>CF</b>	Cystic Fibrosis
<b>CFTR</b>	Cystic Fibrosis transmembrane regulator
<b>CMV</b>	Cytomegalovirus
<b>CN</b>	Crigler Najjar
<b>CRP</b>	C reactive protein
<b>CT</b>	Computed tomography
<b>CVP</b>	Central venous pressure
<b>EBV</b>	Epstein Barr virus
<b>ECG</b>	electrocardiography
<b>GGT</b>	Gamma glutamyl transferase
<b>GI</b>	gastrointestinal
<b>HA</b>	Hepatic artery
<b>HAT</b>	Hepatic artery thrombosis
<b>HAV</b>	Hepatitis A Virus
<b>HB</b>	Hepatoblastoma
<b>HBF</b>	Hepatic blood flow
<b>HBV</b>	Hepatitis B virus
<b>HCC</b>	HEPATOCELLULAR CARCINOMA
<b>HCV</b>	Hepatitis c virus
<b>HIV</b>	Human immunodeficiency virus
<b>ICU</b>	: Intensive care unit
<b>IL-2</b>	Interleukin 2
<b>INR</b>	International normalized ratio
<b>IVC</b>	Inferior vena cava

<b>IVIG</b>	Intravenous immunoglobulin
<b>LDL</b>	Low density lipoprotein
<b>LFTS</b>	Liver function tests
<b>LLS</b>	Left lateral segment
<b>LTX</b>	Liver transplantation surgery
<b>mABS</b>	Monoclonal antibodies
<b>MDR 3</b>	multidrug resistance GENE 3
<b>MEOS</b>	Mircosomal ethanol oxidizing system
<b>MTOR</b>	Mammalian target of rapamycin
<b>NASH</b>	Nonalcoholic steatohepatitis
<b>NGT</b>	Nsogastric tube
<b>PAS</b>	Periodic acid-Schiff
<b>PCO2</b>	Partial pressure of carbon dioxide
<b>PCR</b>	Polymerase chain reaction
<b>PELD</b>	Pediatric end stage liver disease
<b>PFIC</b>	Progressive familial intrahepatic cholestasis
<b>PI</b>	Protease Inhibitor
<b>PICU</b>	Pediatric intensive care unite
<b>PP65</b>	Peptide protein 65
<b>PSC</b>	Primary sclerosing cholangitis
<b>PT</b>	Prothrombin time
<b>PTLD</b>	Posttransplant lymphoproliferative disease
<b>PTT</b>	Partial thromboplastin time

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<b>PV</b>	Portal vein
<b>PVT</b>	Portal vein thrombosis
<b>T3</b>	triiodothyronine
<b>T4</b>	: Activated protein C
<b>tds</b>	Three doses
<b>TSH</b>	Thyroid stimulating hormone
<b>UCD</b>	Urea cycle defect
<b>UGT</b>	URIDINE DIPHOSPHATE GLUCURONOSYL TRANSFERASE
<b>UKTSSA</b>	United kingdom transplant support service
<b>UNOS</b>	United network for organ sharing
<b>VDL</b>	Very low density lipoprotein

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## LIST OF TABLES

<i>Table No</i>	<i>Title</i>	<i>Page</i>
1-1	Functions of the liver	12
1-2	Functions of the bile acid	13
1-3	Site of action of major classes of immunosuppression	23
1-4	Initial protocol of immunosuppression	33
2-1	Causes of chronic liver diseases in pediatrics	35
2-1	Causes of acute liver failure in pediatrics	36
3-1	Implication of PELD score	55
4-1	Protocol for monitoring and investigations for postoperative care pediatric liver transplantation	68
4-2	Protocol of postoperative drug therapy for pediatric liver transplantation	69

## LIST OF FIGURES

<i>Figure No</i>	<i>Title</i>	<i>Page</i>
<b>1-1</b>	<b>The anterior surface of the liver</b>	<b>5</b>
<b>1-2</b>	<b>Visceral surface of the liver</b>	<b>6</b>
<b>1-3</b>	<b>The excretory apparatus of the liver</b>	<b>7</b>
<b>1-4</b>	<b>Functional division of the liver</b>	<b>9</b>
<b>3-1</b>	<b>Standard implantation of the liver with vascular anastomoses and biliary reconstruction</b>	<b>62</b>
<b>3-2</b>	<b>Liver transplantation using the left lateral segment</b>	<b>64</b>

Starzl performed the first human liver transplant in 1963. Since then, the evolution of immunosuppression and the development of new surgical approaches have led to the establishment of 100 transplant centers in the United States. Surgeons currently perform more than 500 pediatric transplantations per year.

Liver transplantation is a treatment, used in appropriately selected patients, for acute and chronic liver failure due to any cause. It is not indicated if an acceptable alternative is available or if contraindications are present (eg, some cases of malignancy, terminal conditions, poor expected quality of outcome).

Pediatric patients account for about 12.5% of liver transplant recipients. When a pediatric patient is likely to require a liver transplant, the medical management is generally divided into pretransplant and posttransplant periods.

Pretransplantation care needs to take into consideration potentially prolonged waiting periods and to project far in advance when transplantation might be required. By initiating the pretransplant workup early, one can work toward maximizing the nutritional status, psychological support for the family and child, immunization and the medical management of complications of end stage liver diseases.

Organ availability remains the main problem facing pediatric end stage liver disease patients but the evolution of new

## English summary

surgical techniques as left lateral segment liver transplantation and live donor orthotopic liver transplantation has improved organ availability.

The evolution of new immunosuppression drugs and protocols has improved the clinical outcome of pediatric liver transplantation by decreasing organ rejection and infectious complications.

Posttransplantation care should focus on closed monitoring and investigations of the graft functions and early detection of any complications.

## الملخص العربي

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