

INTESTINAL TRANSPLANTATION

Essay

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا
مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ
الْحَكِيمُ

صدق الله العظيم

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DEDICATION

**TO THE SOUL OF MY FATHER , MY BELOVED MOTHER
& MY DEAR BROTHER HANY.**

**TO SURGICAL PATIENTS WHO INSPIRE ME TO PROCEED
FOR THIS WORK.**

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Abbreviations

AIDS:	Acquired Immuno-Deficiency Syndrome.
AFP :	Alpha Feto protein.
ALT :	Alanine transferase.
AST :	Aspartate transaminase.
ATP :	Adenosine Triphosphate.
BT :	Bacterial Translocation.
CMV:	Cytomegalovirus.
CNS :	Central Nervous System.
CSA:	Cyclosporine.
CT :	Computed Tomography.
DD :	Deceased Donor.
DNA :	Deoxyribonucleic Acid.
3-D :	Three-Dimensional.
EBV	Epstein-Barr Virus.
ERCP:	Endoscopic Retrograde Cholangio-Pancreatography.
FAE	Follicle Associated Epithelium.
GALT	Gut Associated Lymphoid Tissue.
GFR	Glomerular Filtration Rate .
GI	Gastro Intestinal.
GT	Gastrostomy Tube.
GGT	Gamma Glutamyl Transferase.
GVHD	Graft Versus Host Disease.
HCFA	Health Care Financing Administration.
HIV	Human Immunodeficiency Virus
HLA	Human Leukocytic Antigen.
HPN	Home Parenteral Nutrition
ICA	Ilio Colic Artery.
ICV	Ilio Colic Vein.
ICU	Intensive Care Unit.
IDF	Intestinal Disease Foundation.

IELs	Intra-Epithelial Lymphocytes.
IF	Intestinal Failure
IFALD	Intestinal Failure Associated Liver Disease.
IgA	Immuno- globulin A
IL-2 R	Interleuken-2 Receptors
INR	International Normalized Ratio.
ITx	Intestinal Transplantation of any intestine inclusive graft
I-ITx	Isolated Intestinal Transplantation.
ITR	Intestine Transplant Registry.
IV	Intra venous.
IVC	Inferior Vena Cava.
JT	Jujnostomy Tube.
LD	Living Donor.
LDITx	Living Donor Intestinal Transplantation.
L-ITx	Liver- Intestine Transplantation.
LR-SBTx	Living Related –Small Bowel Transplant.
MCT	Medium Chain Triglycerides
MCV	Mean Corpuscular Volume.
MLNs	Mesenteric Lymph Node.
MMF	Mycophenolate Mofetil.
MRA	Magnetic Resonance Angiography
MVT	Multi-Visceral Transplantation.
mMVT	modified Multi- Visceral Transplanation.
NEC	Necrotizing Enterocolitis .
OK3	Orthoclone.
PACU	Post Anesthesia Care Unite
PCP	Poly Cystic Carenii Peumonia
PCR	Polymerase Chain Reaction.
PN	Parental Nutrition.
PRA	Panel Reactive Antibody.
PTLDs	Post Transplant lymphoproliferative Disorders.

PTT	Partial Thromboplastine Time
PV	Portal Vein.
RAST	Radio-allergo-sorbent
RBCs	Red Blood Corpuscles.
RCA	Right Colic Artery.
RCV	Right Colic Vein.
RNA	Ribo Nuclic Acid.
SI-LT	Simultaneous Intestine Liver Transplant.
SMA	Superior Mesentric Artery.
SMV	Superior Mesentric Vein.
TAC	Tacrolimus.
TLR	Toll Like Receptors.
TPN	Total Parental Nutrition.
TRIO	Transplant Recipient International Organization.
TMP-SMX Tri	Trimethoprime-Sulfamethoxazole.
UCLA	University of California Los Anglos.
UNOS	United Network for Organ Sharing.
UW	University of Wisconsin solution.
WBCs	White Blood Cells.

ABSTRACT

Intestinal transplantation is a life saving procedure for patients with chronic irreversible intestinal failure with life threatening TPN related complications. Short bowel syndrome is the most common cause for intestinal failure and thus, the main indication for intestinal transplantation. The procedure can be done in pediatrics & adult patients. Three types of surgical techniques are adapted to the need of the patients: isolated small Bowel transplant, combined graft with the liver and multi-viseral graft that can be taken from cadavers or living donors. GVHD, Rejection and PTLN are most important complications. With the introduction of tacrolimus in the 1990s, a new chapter in intestinal transplantation began as it finally put this challenging procedure into clinical acceptance by decreasing the incidence of rejection and increasing graft and patient survival rates after transplantation .

Keywords :

(short bowel syndrome ,intestinal failure ,intestinal transplantation , rejection , GVHD, PTLN, tacrolimus)

AIM OF WORK:

This work aims to review

Historical perspective of intestinal transplantation, normal physiologic anatomy of small intestine ,immunology of small intestine, the concept of intestinal failure, indications and contraindications of intestinal transplantation, evaluation and workup selection for the donor and recipient of intestinal transplantation ,types of surgical procedures used for intestinal transplantation ,post operative care issues, post operative complications of both living donors and recipients ,quality of life after intestinal transplantation, review of current status & results of intestinal transplantation.