

Goals - PGY4 - LL Transplant

Transplant Surgery Goals and Objectives

PGY 4

Goals:

Loma Linda University Medical Center will provide a learning environment for the care, treatment and follow up of transplantation patients. Surgical basic science, including immunosuppression, fluids, electrolytes, wound healing and nutrition, will be emphasized. Clinically, residents will assess surgical pathology pre-operatively, develop clinical judgment on managing these issues, and learn operative skills to address the problem. Careful postoperative care and follow up will be emphasized.

Objectives:

Medical Knowledge

UNIT 1

ORGAN PROCUREMENT

Unit Objectives

- I. Understand the moral, ethical and legal issues and steps involved in determining brain death.
- II. Understand the moral, ethical and legal issues and steps involved in live organ donation.
- III. Describe the basic assessment of the medical, laboratory, and anatomic characteristics of a potential organ donor (live or deceased), the quality of a donor organ, and its suitability for a given recipient.
- IV. Outline in detail the procedure to safely recover abdominal organs from deceased donors, including those for donation after cardiac death (DCD).
- V. Understand the recovery processes for living donor organs and describe the steps necessary to perform relevant organ specific recovery (liver, kidney, or pancreas).
- VI. Outline the basic principles and limits of organ preservation and be familiar with organ preservation techniques, including pulsatile perfusion. Learner Objectives

UNIT 2

PHARMACOLOGY AND IMMUNOSUPPRESSION

Unit Objectives

- I. Explain the basic pharmacology (mechanisms of action, metabolism, adverse effects, potential interactions, dosing strategies, and target levels) for all immunosuppressive agents in current clinical use.
- II. Outline potential complications and clinical and laboratory markers of over-and under-immunosuppression.
- III. Define the donor and recipient factors which impact the use of immunosuppressive agents including the risk of rejection, infection, and malignancy.
- IV. Identify the clinical and pathologic features of acute and chronic cellular and humoral rejection and implement appropriate pharmacologic therapy; identify short and long term ramifications of rejection episodes.

UNIT 3

KIDNEY TRANSPLANTATION

Unit Objectives

- I. List the indications for kidney transplantation, explain the different disease processes resulting in end-stage renal disease, and describe the treatment options.
- II. Outline the basic of principles of donor and recipient selection and deceased donor organ allocation.
- III. Describe and perform living and deceased donor kidney transplant procedures.
- IV. Explain the basic immunosuppressive strategies used in kidney transplantation, including induction and maintenance therapy.
- V. Recognize and diagnose renal transplant rejection, identify basic pathologic findings of rejection, and describe treatment strategies for rejection.
- VI. Describe appropriate long term follow-up and be able to identify and treat short and long term complications of kidney transplantation.
- VII. Describe the short and long term outcomes of kidney transplantation.
- VIII. Outline the basic principles of renal replacement therapy; identify indications for and surgical techniques necessary to place hemo-and peritoneal dialysis access.

UNIT 4

PANCREAS TRANSPLANTATION

Unit Objectives

- I. List the indications for pancreas transplant, both solid organ and pancreas islet cell transplant.
- II. Understand donor and recipient selection criteria for both solid organ and islet cell transplant.
- III. Describe the steps involved in the surgical aspect of pancreas transplant including organ procurement (pancreas and back bench preparation).
- IV. Understand various immunosuppressive regimens for induction, maintenance, and treatment of rejection of pancreas transplant.
- V. Describe strategies involved in deciding about timing of pancreas transplant, such as Simultaneous Pancreas and Kidney, Pancreas after Kidney, and Pancreas only transplants.
- VI. Describe short and long term outcomes of pancreas and islet cell transplant.
- VII. Understand various aspects of Type 1 and 2 diabetes mellitus and their effects on end organs.

UNIT 5

LIVER TRANSPLANTATION

Unit Objectives

- I. Outline the basic principles of liver transplantation, donor and recipient selection and donor allocation.
- II. Describe the types of immunosuppressive therapy utilized in liver transplantation.
- III. List the different disease processes which may require liver transplantation; understand the management of complications of liver disease including end stage liver disease and the care of patients with fulminant hepatic failure.
- IV. Describe the workup needed to diagnose liver transplant rejection.
- V. Describe the operative steps necessary involved in performing liver allograft recovery from deceased donors and deceased donor liver transplant.
- VI. Diagnose and implement treatment approaches for both short and long term medical and surgical complications following liver transplantation

UNIT 6

HEPATOBIILIARY SURGERY

Unit Objectives

- I. Understand and describe the surgical anatomy of the liver and biliary tract.
- II. Understand the physiology and function of the liver and biliary tract
- III. Understand the use of radiologic imaging of the liver and biliary tree
- IV. Describe the preoperative assessment of hepatobiliary patients
- V. Understand the indications and contraindications for liver biopsy
- VI. Understand the pathophysiology and management of common hepatobiliary diseases
- VII. Describe the postoperative management of a patient undergoing hepatobiliary surgery
- VIII. Gain experience with specific operative skills necessary in hepatobiliary surgery
- IX. Residents will have an opportunity to be exposed to the following operative procedures

Patient Care

Establish basic proficiency in providing pre-operative and post-operative care (writes appropriate pre-op and post-op orders for floor patients, handles nursing calls appropriately, and manages most routine post-operative care with minimal intervention by supervisor).

Take an appropriate history to evaluate patients with transplant issues to include:

- a. A complete history of present illness
- b. Presence of any co-morbidities
- c. A review of social and family history impacting the present problem
- d. A complete review of systems

Demonstrate an increasing level of skill in the physical examination of the transplant patient with a special emphasis in recognition of the surgical abdomen.

Develop a proficiency in evaluation and interpretation of the different diagnostic modalities including: X-rays, ultrasounds, CT scans, Contrast studies and MRIs.

Discuss treatment options, risks and potential complications of patients with transplant issues.

Assist in the performance of general surgical and laparoscopic procedures.

Participate in the pre- and post- operative surgical management of patients after organ transplantation.

Participate in the peri-operative management of immunosuppressive drug therapy, including monitoring drug levels and treating potential toxicity.

Diagnose acute and chronic organ rejection using clinical signs and symptoms as well as serum chemistries and radiologic studies.

Recognize and manage postoperative surgical complications, including wound infection, anastomotic stenoses and leaks, and lymphocele formation in immunosuppressed patients.

Participate in the evaluation of potential candidates for living-related and cadaveric organ transplantation, including

- a. clinical suitability
- b. strength of social support
- c. expected graft and patient survival

Participate in the evaluation of patients suspected of organ rejection to include:

- a. laboratory and radiologic testing
- b. administration of immunosuppressive agents
- c. following patients for potential acute and chronic side effects

Demonstrate skill in basic surgical techniques, including:

- Knot tying
- Exposure and retraction
- Knowledge of instrumentation
- Incisions
- Closure of incisions
- Handling of graft material including mesh
- Establishing pneumoperitoneum
- Handling of laparoscopic instruments
- Handling of the laparoscopic camera

Evaluate and institute management of abdominal wound problems.

Coordinate pre and post-surgical operative care for patients in the Transplant Surgery rotation.

Assist in closure of abdominal incisions and exhibit competency in suture technique.

Be able to apply and remove all types of dressings.

Make and close a variety of incisions and tie knots using sterile technique.

Professionalism

The resident should be receptive to feedback on performance, attentive to ethical issues and be involved in end-of-life discussions and decisions.

Understand the importance of honesty in the doctor-patient relationship and other medical interactions.

Treat each patient, regardless of social or other circumstances, with the same degree of respect you would afford to your own family members.

Learn how to participate in discussions and become an effective part of rounds, attending staff conference, etc.

Complete all assigned patient care tasks for which you are responsible or provide complete sign out to the on-call resident.

Maintain a presentable appearance that sets the standard for the hospital that includes but is not limited to adequate hygiene and appropriate dress. Scrubs should be worn only when operating or while on call.

Assist with families of critically injured/ill patients and guidance of families towards or through difficult decisions.

Demonstrate mentoring and positive role-modeling skills.

Provide an appropriate orientation and guide all medical student as to their roles and responsibilities during the rotation.

Provide an appropriate orientation to other PGY 2's that are about to rotate through the transplant surgery service.

Systems-Based Practice

Understand, review, and contribute to the refinement of clinical pathways

Understand the cost implications of medical decision-making

Partner with health care management to facilitate resource efficient utilization of the hospital's resources.

Describe in general terms the benefits of clinical pathway implementation

Develop a cost-effective attitude toward patient management.

Develop an appreciation for the benefits of a multi-disciplinary approach to management of critically ill surgical patients.

Comply with the Health Insurance Portability and Accountability Act of 1996 (HIPAA) regulations regarding patient privacy and confidentiality.

Demonstrate knowledge in steps and conduct during major surgical procedures.

Have clear indications and know when it is appropriate to perform a surgical procedure.

Have an understanding of when it is not appropriate to operate.

Demonstrate knowledge of steps to be taken to have a patient ready for surgery including preop workup and medical clearance.

Practice-Based Learning & Improvement

Demonstrate the ability to:

- Evaluate published literature in critically acclaimed journals and texts
- Apply clinical trials data to patient management
- Participate in academic and clinical discussions

Accept responsibility for all dimensions of routine patient management on the wards

Apply knowledge of scientific data and best practices to the care of the surgical patient

Facilitate learning of medical students and physician assistant students on the team.

Use the LLUMC library and databases on on-line resources to obtain up to date information and review recent advances in the care of the surgical patient.

Demonstrate a consistent pattern of responsible patient care and application of new knowledge to patient management.

Demonstrate a command and facility with on line educational tools.

Interpersonal & Communication Skills

Work as effective team members

Cultivate a culture of mutual respect with members of nursing and support staff

Develop patterns of frequent and accurate communication with team members and attending staff

Gain an appreciation for both verbal and non verbal communication from patients and staff

Demonstrate consistent respectful interactions with members of nursing and support staff

Demonstrate consistent, accurate and timely communication with members of the surgical team

Demonstrate sensitivity and thoughtfulness to patients concerns, and anxieties.

The resident will demonstrate the ability to provide and request appropriate consultation from other medical specialists.