

GENERAL SURGERY

PGY-3 Resident

Knowledge Objectives:

1. Embryology, anatomy, and physiology of neonatal surgical diseases.
2. Pathophysiology of neonatal:
 - Respiratory distress
 - Cyanosis
 - Gastroesophageal reflux
 - Jaundice
 - Bilious emesis
 - Bloody diarrhea
 - Abdominal distension
 - Abdominal wall defects
3. Knowledge of pediatric diseases including :
 - Pyloric stenosis
 - Intestinal obstruction
 - Necrotizing enterocolitis
 - Intussusception
 - Perforated appendicitis
 - Inguinal hernia
4. Knowledge of physics and dynamics of thermal injury
5. Pathophysiology of the burned patient including:
 - Initial evaluation and fluid resuscitation
 - Principles of burn shock, immunologic alteration, and local and systemic bacteriology of the burned patient
 - Understanding of anatomy and selection of skin grafts
 - Understanding of compartment syndrome, fasciotomy and escharotomy
6. Immune system including:
 - Humoral and cellular immunity
 - Activity of macrophage as antigen presenting cell
 - T-cell activation and roles of CD4+ and CD8+ and the release of interleukins
7. Mechanism of action and side effects of:
 - Azathioprine
 - Cyclosporine
 - Prednisone
 - Tacrolimus (FK506)
 - OKT3
 - Monoclonal antibodies used for induction and prevention of rejection

- Mycophenolatemofetil (RS6144)
8. Knowledge of the HLA system and role of tissue typing in organ transplantation
 9. Criteria for organ and tissue donation,
 10. Definition of brain death
 11. Pathophysiology of cerebrovascular disease
 12. Understand life threatening signs of vascular disease and know when intervention is necessary
 13. Understand the pathophysiology of renovascular hypertension
 14. Understand the principles of ultrasonography as applied to the diagnosis of :
 - Disease of the thyroid gland
 - Hepatobiliary system
 - Disease of the breast
 - Penetrating and blunt trauma
 15. Understand the principles of Duplex scan and its diagnostic value in diagnosis of:
 - Carotid artery disease
 - Renal artery disease
 - SMA disease
 - Venous disease
 16. Understand the principles of segmental pressures
 17. Understand non-atherosclerotic arterial disease
 18. Understand the role of drug therapy:
 - Heparin
 - Coumadin
 - Aspirin
 - Urokinase
 - Tissue plasminogen activator
 - Ticlopidine
 - Clopidogrel bisulfate
 - Pentoxifylline
 19. Criteria for admission and discharge from the intensive care unit
 20. Moral and ethical problems encountered in the intensive care unit.
 21. Knowledge of lesions found during upper and lower gastrointestinal endoscopy

Skills Objectives:

1. Formulate a plan for neonates with problems such as:
 - Respiratory distress
 - Cyanosis
 - Gastroesophageal reflux
 - Jaundice
 - Bilious emesis
 - Bloody diarrhea
 - Abdominal distension
 - Abdominal wall defects
2. Perform or assist in all major surgical procedures performed on the pediatric surgical service.
3. Conduct comprehensive preoperative evaluation and postoperative management for all neonates and pediatric patients.
4. Provide emergency burn patient evaluation and monitoring. Determine the level of care and need for transfer to a burn facility.
5. Implement resuscitation protocols, manage systemic effects of burns, diagnose and treat inhalation injury.
6. Evaluate and manage electric and chemical burns.
7. Perform burns escharotomy
8. Evaluate potential candidates for living-related and cadaveric organ transplantation including.
9. Participate in the pre and postoperative management of the transplanted patient.
10. Participate in the perioperative management of immunosuppressive drug therapy.
11. Identify signs of organ rejection
12. Participate in the preparation and handling of multiple organ harvest in the brain dead patient.
13. Be able to perform a comprehensive vascular consult.
14. Apply the principles of ultrasonography and duplex , and CT scanning to diagnose:
 - Breast pathology
 - Hepatobiliary pathology
 - Pathology of thyroid gland
 - Hemoperitoneum
 - Hepatic and splenic injury
 - Carotid artery stenosis
 - Renal artery stenosis

- Deep vein thrombosis
15. Perform AV access surgery
 16. Perform anastomosis of large and medium size vessels.
 17. Perform major amputations.
 18. Select appropriate drug treatment for patients with arterial and vascular disease
 19. Perform or assist in upper and lower gastrointestinal endoscopic procedures including banding of varices, ERCPs, stenting of common bile and pancreatic ducts.