

GENERAL SURGERY

PGY-5 Resident

Knowledge Objectives:

1. Knowledge of regulatory agencies including state licensing authority, state and local public health rules and regulations, and regulatory agencies such as HCFA, PRO, JCAHO, NCQA.
2. Knowledge of basic practice management principles such as budgeting, record keeping, medical records, and the recruitment, hiring, supervision and management of staff.
3. In-depth knowledge of methods of Evidence-Based Medicine to the analysis of medical literature-
4. Knowledge and ability to apply scientific principles to clinical decision-making.
5. In-depth knowledge of principles of research design.
6. Ability to present papers at local and national meetings.
7. Discuss the clinical and economic rationale for blood component transfusion therapy, including:
 - Role of acute limited normovolemic hemodilution
 - Role of autologous blood donation and use
 - Use of cell-saver
 - Alternatives to the use of blood products in Jehovah's witnesses
 - NIH consensus recommendations for use of blood products
8. Wound healing in the elderly.
9. Role of High-PEEP, Pressure-controlled ventilation, Prolonged Inspiratory Time Ventilation, Airway Pressure Release Ventilation, High Frequency Jet Ventilators, Oscillators and ECMO in ARDS.
10. Indications and use of CAVH, CVVH, CVVHD, CAVHD with and without renal replacement.
11. Triaging of critically ill patients to the intensive care unit.
12. Understanding the role of new technology in the intensive care unit.
13. Discuss the pathophysiology, clinical presentation, work-up, and management of:
 - Solitary thyroid nodule
 - Thyrotoxicosis
 - Primary, secondary, and tertiary hyperparathyroidism
 - Insulinoma/glucagonoma/vipoma
 - Gastrinoma
 - Gastrointestinal carcinoid tumors

14. Discuss the preoperative preparation/management of:
 - Thyrotoxicosis
 - Pheochromocytoma
 - Hyperaldosteronism
 - Carcinoid crisis
 - Adrenal insufficiency crisis

15. Knowledge of the surgical approach to:
 - The left and right adrenal glands
 - The head of the pancreas
 - The body and tail of the pancreas
 - The inferior and superior parathyroids glands
 - The retrosternal goiter

16. Understanding the role of the following in the management of endocrine surgery:
 - Localizing modalities (metaiodobenzylguanine [MIBG], sestamibi, selective venous sampling, intraoperative tumor localization, rapid parathyroid hormone [PTH] assay)
 - Diagnostic assays (sensitive TSH, C-peptide, FNAB)

17. Knowledge of anesthetic management during endocrine surgery, including:
 - Airway management during head and neck surgery
 - Cardiovascular manipulations during thyroid and pheochromocytoma surgery

18. Outline the appropriate surgical management of disorders of the pancreas (chronic pancreatitis, pancreatic pseudocysts, cystadenomas, adenocarcinomas, ampullary carcinomas) including the technical details and options for:
 - Pancreaticoduodenectomy
 - Distal pancreatectomy
 - Total pancreatectomy
 - Subtotal pancreatectomy
 - Longitudinal pancreaticoduodenostomy (Puestow procedure)
 - Cystogastrostomy, cystoduodenostomy, cystojejunostomy)

19. Detailed knowledge of the anatomy of the liver and biliary tract

20. Detail the appropriate surgical management of any selected disorder of the liver or biliary tract, including:
 - Hepatocellular carcinoma
 - Cholangiocarcinoma of extrahepatic ducts
 - Hepatoma in the cirrhotic liver
 - Hemangioblastoma
 - Sclerosing cholangitis

- All form of cirrhosis
 - Benign and malignant biliary strictures
 - Choledochal cysts
21. Knowledge of the physiologic and organic manifestations of vascular disease, such as:
- Renovascular hypertension
 - Portal hypertension
 - Renal failure
22. Describe the operative exposure of the major vessels, including:
- Aortic arch
 - Proximal right and left subclavian
 - Carotid artery
 - Descending thoracic aorta
 - Suprarenal aorta
 - Infrarenal aorta
 - Femoral artery
 - Popliteal artery above and below the knee
 - Anterior, posterior tibial and peroneal arteries
23. Knowledge of basic principles of endovascular repair of abdominal aortic aneurysms.
24. Knowledge of factors for decision making in vascular surgery:
- Risk/reward ratio
 - Preoperative cardiac assessment
 - Morbidity and mortality probability
25. Outline the management of graft infections.
26. Knowledge of complications of major vascular procedures.
27. Knowledge of the management of concomitant intraabdominal pathology found at the time of AAA repair, such as:
- Cholelithiasis
 - Colon cancer
 - Renal tumors
28. Understanding issues associated with preservation of pelvic circulation through reperfusion of one of the hypogastric, significance of previous colectomy, and indications for re-implantation of inferior mesenteric artery during AAA repair.
29. Issues associated with the management of renovascular and mesenteric occlusive disease, or suprarenal extension of aneurysm during repair of AAA.
29. Knowledge of the management of carotid disease in the elderly with respect to:
- Natural history, if untreated

- Effect of life expectancy and gender on the benefits of CEA in asymptomatic patients
 - Causes of stroke during CEA
 - Understanding the etiology of recurrent carotid artery stenosis
 - Role of carotid artery stenting
30. Understand the principles of selection of bypass conduits such as:
- In situ saphenous vein
 - Reversed saphenous vein
 - Transposed saphenous vein
 - Prosthetic grafts
 - Lesser saphenous vein
 - Arm veins
 - Prosthetic grafts with vein cuff

Skills Objectives:

1. Direct all surgical management of patients in the ICU, including taking care for admission and discharge.
2. Communicate effectively and compassionately with families (supporting their emotional needs) with respect to issues concerning life-sustaining measures of the critically ill patients and withdrawal of therapy understanding their values system.
3. Be an effective surgical team leader with good time management and organizational skills.
5. Be able to teach effectively medical students and residents.
6. Participate in departmental meetings, prepare evaluations of junior residents, and serve on at least two hospital committees (GME, Quality Assurance, Surgical Education, OR, or Tissue Committee).
7. Supervise a junior resident through the following:
 - Appendectomy
 - Uncomplicated laparoscopic cholecystectomy
 - Simple hernia repair (inguinal and umbilical)
 - Omentopexy of a perforated duodenal ulcer
 - Uncomplicated right hemicolectomy
 - Uncomplicated small bowel resection
 - Exploratory laparotomy and lysis of adhesions.
8. Coordinate the overall care of patients with complex pancreatic disease, including initial evaluation, appropriate diagnostic work-up, and operative management of:
 - Pancreatic abscess and infected pancreatic necrosis
 - Cystadenomas
 - Periampullary carcinomas
 - Endocrine tumors of the pancreas

9. Perform complex pancreatic procedures such as:
 - Whipple resection
 - Total and subtotal pancreatectomy
 - Drainage of pancreatic abscess and necrosectomy
 - Local resection of ampullary tumors
 - Exploration for islet cell tumors
10. Coordinate the overall care of the patient with hepatobiliary disease, including:
 - Initial evaluation
 - Appropriate diagnostic studies
 - Indicated consultations
 - Operative management
11. Perform complex hepatobiliary procedures and procedures on the extrahepatic biliary system, including:
 - Anatomic liver resection
 - Portosystemic shunts (portocaval, mesocaval, splenorenal central and distal)
 - Resection cholangiocarcinomas
 - Choledochal cysts
 - Benign biliary strictures
 - Assist on liver transplant
 - Assist on hepatopertoenterostomy
12. Obtain vascular control of the aorta:
 - In the left chest
 - At the hiatus
 - Above the renal arteries
 - Below the renal arteries
13. Obtain vascular control of the inferior vena cava above and below the renal veins and in the pericardium.
14. Expose and control the superior mesenteric artery for embolectomy and bypass.
15. Perform under supervision carotid endarterectomy.
16. Perform under supervision AAA repair.
17. Perform under supervision extra-anatomic bypass such as:
 - Femoro-femoral bypass
 - Axillo-axillary bypass
 - Axillo-bifemoral bypass
18. Manage prosthetic graft infections, including:

- Diagnosis
- Selection of alternate route of revascularization
- Selection of appropriate graft material
- Timing

19. Manage complications of major vascular procedures such as:

- Carotid endarterectomy
- Aortic reconstruction
- Lower extremity revascularization