General Surgery

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Goals of this presentation

- Review the role of Inpatient Nurse Practitioner
- Identify the 3 main General Surgery services
- Describe Surgical Oncology services
  - GI/Breast
  - Liver/Endocrine
- Describe MIS service
- Describe Colorectal service
- Questions/Discussion

Role of Nurse Practitioner in General Surgery

- Round with surgical team and attendings
- Inpatient management of care
- Communication with nurses
- Admit patients (ED, post-op)
- Discharge patients
- Outpatient calls and triage
- Assess and treat consults
- Multidisciplinary care and communication
- Minor procedures, RNFAs in training
- "Allow residents time in the OR"

Green and Blue Surgery

- Green Surgery:
  - GI/Breast
    - Appendix
    - Breast
    - Pancreas
    - Gastric
    - Colon
  - Liver/Endocrine
    - Esophagus
    - Hepatobiliary
    - Thyroid
- Blue Surgery:
  - Colorectal Surgery – Laparoscopic, Robotic or Open
    - Small and Large Bowel, Anorectal
- Silver Surgery:
  - Minimally Invasive Surgery – Laparoscopic or Robotic
    - Esophagus, Stomach, Gallbladder, Appendix, Hernia

Surgical Oncology (Green Surgery)

- GI/Breast
  - Dr. Andrew Lowy
  - Dr. Kaitlyn Kelly
  - Dr. Sarah Blair
  - Dr. Anne Wallace
- Liver/Endocrine
  - Dr. Bryan Clary
  - Dr. Michael Bouvet
  - Dr. Joel Baumgartner
  - Dr. Al Hemming
  - Dr. Jason Sicklick

Blue and Silver Surgery

- **Colorectal Surgery:**
  Dr. Sonia Ramamoorthy
  Dr. Bryan Sandler
  Dr. Sam Eisenstein
  Dr. Bard Cosman
  Dr. Lisa Parry
- **Minimally Invasive Surgery (MIS):**
  Dr. Garth Jacobsen
  Dr. Santiago Horgan
  Fellow Dr. Elisa Coker
  Fellow Caitlyn Houghton

Common Surgical Oncology Procedures

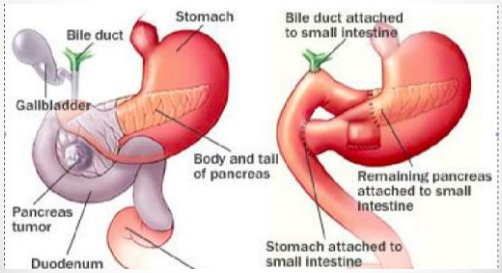
- Whipple Procedure
- Cytoreduction/HIPEC
- Hepatobiliary Surgery
- Endocrine Surgery
- Esophagectomy
- Lumpectomy, Mastectomy

Whipple Procedure

- Used for pancreatic cancer patients
- Also called pancreaticoduodenectomy
- The procedure involves removal of the pancreas head and then the duodenum, the first portion of the small bowel

- Nursing Considerations:
  - Critical NGT
  - Hyper/Hypoglycemia
  - IV PCA, IV Tylenol for pain
  - Adjuvant Chemo often before and/or after
  - Average 1 week hospital stay

Whipple Procedure

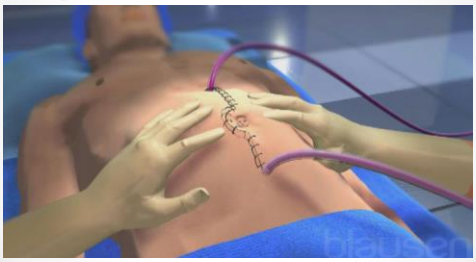


Cytoreduction/HIPEC

- Cytoreduction: removal of tumor
- HIPEC: heated intraperitoneal chemoperfusion
- Performed for cancer spread to surfaces of the peritoneal cavity from primary colorectal cancer, appendiceal cancer, or mesothelioma, and peritoneal carcinomatosis

- Nursing Considerations:
  - Epidural and IV Tylenol (Acute Pain Service)
  - Gastrostomy Tube (gravity drainage, clamp trials)
  - Parenteral nutrition
  - Abscess drainage (IR)
  - Average 7-10 hospital stay
  - Gtube and Lovenox teaching at discharge

Cytoreduction/HIPEC

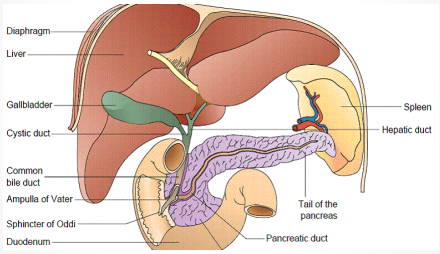


Hepatobiliary Surgery

- Surgery of the liver, bile ducts and pancreas
- Liver resection for primary and secondary liver malignancies
- Resection of benign liver tumors (cyst, adenoma, hemangioma)
- Management of complex biliary problems

- Nursing Considerations:
  - Close post of management of coagulation abnormalities
  - Aggressive phosphorus replacement
  - Biliary drains (internalized, externalized)

Hepatobiliary Surgery



Endocrine Surgery

- Thyroidectomy for thyroid nodules and thyroid cancer
- Minimally invasive parathyroidectomy for primary hyperparathyroidism
- Laparoscopic adrenal surgery
- Extensive neck dissections

- Nursing considerations:
  - One night hospital stay (monitor airway, bleeding, swallowing)
  - Frequent Calcium (Ca) and Parathyroid Hormone (PTH) blood tests
  - Discharge teaching: symptoms of hypocalcemia
  - May need JP drain teaching at discharge

Endocrine Surgery

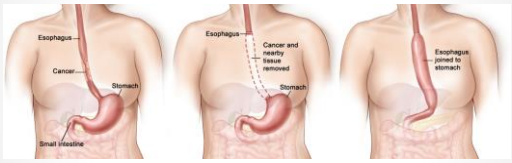
Esophagectomy

- Surgery is the most common treatment for esophageal cancer. Neoadjuvant therapy common before surgery
- Laparoscopic, endoscopic, robotic and open surgical approaches

- Nursing Considerations:
  - Critical NGT – often indwelling for ~5 days
  - Radiographic swallow evaluation POD 4- 7
  - Post esophagectomy diet
  - Surgical drain near anastomosis to evaluate for leak

Robotic Esophagectomy

Esophagectomy



Lumpectomy, Mastectomy

- Lumpectomy or segmental mastectomy – removal of affected tissue to allow for breast conservation
- Mastectomy – removal of the entire breast
- Lymph node biopsy or dissection
- First stage of breast reconstruction can begin at end of case by Plastic Surgery

- Nursing Considerations:
  - Pain management, Nausea management
  - Drain teaching as patients are discharged with 2-4 JP drains in place
  - Social Work consult
  - Occupational Therapy consult
  - Emotional support

Mastectomy

Common MIS procedures

- Laparoscopic Sleeve gastrectomy
- Laparoscopic Nissen or Toupet Fundoplication
- Esophagectomy
- Revision of Roux-en-Y gastric bypass
- Laparoscopic Cholecystectomy
- Laparoscopic Appendectomy
- Laparoscopic Hernia repair

Common Colorectal Procedures

- Right Hemicolectomy
- Transverse Colectomy
- Left Hemicolectomy

→ Total Abdominal Colectomy

- Sigmoid Colectomy

→ LAR/APR

- TAMIS (transanal MIS for rectal cancer)
- Ileostomy
- Colostomy
- Multistage surgeries over several months for J-pouch and re-anastomosis to reconnect to rectum and takedown ostomy

Laparoscopic Sleeve Gastrectomy

- Bariatric surgery for morbidly obese patients

Anatomy: removal of greater curvature of stomach to permanently reduce size of stomach

Nursing Considerations:

- Aggressive control of post op nausea/vomiting
- Early ambulation – significant risks of DVT with obesity
- Limited Clear liquid diet post op for 2 weeks
- Swallow esophogram am after surgery
- Early removal of foley POD1
- D/C home POD 2 with JP drain – Need JP drain teaching

Hernia Repair with Component Separation

- For large abdominal wall hernias

Anatomy: Open surgery with large undermining of tissues to bring together abdominal muscles and final skin closure.

Nursing Considerations:

- Often strict bed rest in "beach-chair" position for 1-2 days (increased risk of DVT)
- Aggressive control of nausea/vomiting
- Hourly Incentive Spirometer use very important
- JP drains frequently maintained post discharge

Colectomy

- For diseased bowel: Cancer, Obstruction, Volvulus, Stricture, Crohn's, Ulcerative colitis, Diverticular abscess/rupture

Anatomy: Colon absorbs most of the water and electrolytes, heavy reservoir of germs present – all colon surgery is contaminated and risk of post op sepsis/infection is high

Nursing considerations:

- Often critical foley: risk of ureteral or pelvic nerve injury intraop also need to keep pressure off of any bowel anastomosis
- Aggressive pain control, early ambulation and IS use for DVT risk reduction, Ileus risk reduction, atelectasis avoidance
- High risk of sepsis – critical thinking and early contact of surgical team if pattern of tachycardia developing
- High risk of dehydration with high output ostomies or frequent diarrhea – early contact of surgical team
- Crohn's and UC patients poor surgical candidates with immunosuppression, malnutrition, opioid tolerance preop – often delayed recovery and need extensive nursing care.

Questions, Discussion

Bedside G Tube Reference