Prepped for ERCP
by:

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Objectives:

1. Identify two evaluation and imaging modalities for diagnosing pancreatic and biliary disease
2. List three key points necessary for radiation safety
3. Develop a nursing care plan for ERCP patient
Normal Biliary Anatomy
Indications For ERCP

- Jaundice
- Suspected Biliary obstruction (stricture, calculi, tumor, sclerosing cholangitis, papillary stenosis)
- Elevated LFTs
- Pancreatitis
- Biliary or pancreatic stent placement

- Abdominal pain of suspected biliary or pancreatic origin
- Pancreatic duct (PD) obstruction
- Biliary stones
- Fistula of the pancreatic or bile ducts
- Post surgical bile leak
Contraindications for ERCP

- Uncooperative Patient
- Patient physically unable to tolerate procedure
- Recent Myocardial Infarction (MI)
- Non-compliant with NPO guidelines
- Coagulopathy
- Presence of barium or contrast in GI tract
Normal Biliary Anatomy

- A–Liver
- B–Hepatic Ducts
- C–Gallbladder
- D–Cystic Duct
- E–Common Bile Duct
- F–Pancreatic Duct
- G–Pancreas
- H–Duodenum
- I–Papilla
Normal Biliary Anatomy

- Hepatic ducts (from liver)
- Cystic duct
- Gallbladder
- Duodenum
- Pyloric sphincter
- Duodenal papilla - the entry duct for bile and pancreatic enzymes
- Common bile duct
- Pancreatic duct
- Pancreas
- Oesophagus
- Stomach
Jaundiced Patients

Assessment and Diagnosis: Blood tests

- PT/INR, PTT, CBC, CMP, liver panel, amylase and lipase
- CA 19 – 9 (To help differentiate between cancer of the pancreas and other conditions, such as pancreatitis)
- Liver Panel includes:
  - ALP
  - AST – SGOT
  - ALT – SGPT
  - Tbil – (total bilirubin)
  - Bild – (direct bilirubin)
  - Albumin
Imaging and Diagnostic Modalities

- CT Scan
- Magnetic Resonance Cholangiopancreatography (MRCP)
- Endoscopic Ultrasound (EUS)
- Endoscopic Retrograde Cholangiopancreatography (ERCP)
Computed Tomography (CT) Scan

- Radiologic Scan
- Requires use of contrast media given oral and or IV

Generally used to assess:
- Overall structural assessment of the liver and pancreas
- Provides imaging and staging information on biliary and pancreatic tumors, abnormalities
- Ability to assess severity of acute pancreatitis
- Does not offer any therapeutic capabilities
Computed Tomography (CT) Scan

- Cross sectional view of anatomy
- Horizontal slices of anatomy are looked at as individual images
- Provides good detail
Magnetic Resonance Cholangiopancreatography

- Well established tool for evaluating the biliary tree, pancreatic ducts and gallbladder
- Noninvasive radiologic technique
  - Cross sectional, whole-body imaging
  - Does not require contrast or ionizing radiation
  - Allows for accurate depiction of fluid filled spaces
- Usually well tolerated by patients
  - A. Remember to ask if patient has any implanted metal devices
  - B. Has claustrophobia
- Diagnostic accuracy approaches that of ERCP
- Avoids invasive procedure risks of ERCP
- No therapeutic capabilities
MRCP Clinical Image
Biliary, Intrahepatic and Pancreatic

Bile Duct
Pancreatic Duct
Endoscopic Ultrasound (EUS)

- Allows the endoscopic placement of ultrasound probes within the GI tract
- Both imaging and diagnostic
- Radial – 360 degree sector scan
- Linear – 100 degree angle of view coupled with the ability to introduce a needle using ultrasound guidance to perform fine needle aspiration (FNA)
Endoscopic Ultrasound (EUS)

- Procedure combines endoscopy with ultrasound
- Provides high resolution imaging of Liver, CBD and pancreas
- Typically used for:
  - Staging of pancreatic tumors, detection of bile duct stones, aspiration of cysts
Endoscopic Retrograde Pancreatography (ERCP)

- Indicated for evaluation and treatment of benign and malignant strictures
- Diagnostic and therapeutic
- Combined use of:
  - Side-viewing duodenoscope with instrument channel
  - Fluoroscopic monitoring using contrast media
  - Locate stricture site and visually inspect for malignancy
  - Cytology brush, biopsy forceps or fine needle aspiration may be used to obtain tissue sample
Care of Patient Undergoing ERCP

- Why is patient having the ERCP
- What are the patient’s symptoms
- Age of patient (child bearing years)
- What are the patient’s symptoms
- Include family, friends, significant other
- What medication is patient currently taking
- Need for labs, medication pre and post procedure
- Sedation during ERCP
PRE ERCP Care of Patient

- NPO by midnight eve of procedure
- No aspirin or NSAIDS one week before
- Is patient taking any antiplatelet or anticoagulant agents
- Explain procedure to patient and family
- Offer written information that is geared for the patient/family
- Obtain consent
Pre-Procedure care

- Assessment of patient (is their abdomen distended, do they have sleep apnea, no neck syndrome, limited neck rotation)
- Allergies
- Check PT/INR results
- Changes in LFT’s
- Be informed of what meds patient is taking, i.e., stopped anticoagulants
- Verify preprocedure orders, necessary meds (antibiotics, emergency meds)
- Oxygen tank on cart
- DON’T BE AFRAID TO SPEAK UP ABOUT YOUR CONCERNS FOR PATIENT SAFETY
Intra-Procedure Care

- Nurse/Tech prepares ERCP scope and suction equipment
- Nurse/Tech monitors and protects pt. airway during ERCP
- Nurse monitors vital signs, sedates and documents
- Grounding pad, cautery paddle
- Nurse/Tech prepares cannulation catheter(s) and other necessary equipment for ERCP
- Nurse/Tech prepares contrast media (1/2 or full strength depending on MD preference)
- Document amount, strength and type of contrast
- Document fluoroscopy time
Radiation Safety

- Time
- Distance
- Shielding
  - 1. Lead apron
  - 2. Eye protection
  - 3. Dosimetry badge

Radiation is cumulative
Post-Procedure Care

- Evaluate for signs and symptoms of possible stent malfunction if stent placed
- Recurrent Jaundice
- Abdominal pain
- Elevated temperature
- Elevated serum bilirubin levels
- Rest
- Hydration
- Medication
Successful ERCP relies not only on technology, but the collaboration and interaction of a well coordinated collegial endoscopic team.
Did you find anything Doctor??

Questions?


