



ERCP (Endoscopic Retrograde Cholangiopancreatography)

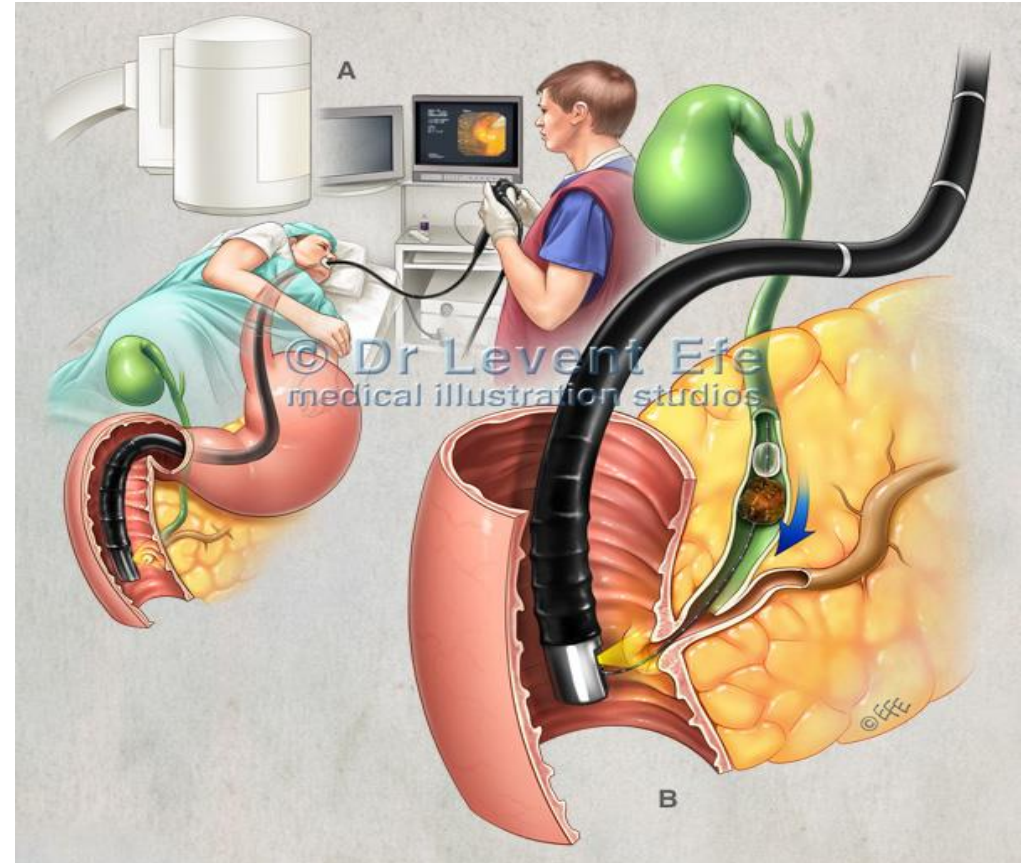
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Objectives

- Understand the purpose and principles of ERCP.
- Identify nursing responsibilities before, during, and after the procedure.
- Recognize potential complications and management strategies.
- Reinforce infection control practices in ERCP settings.

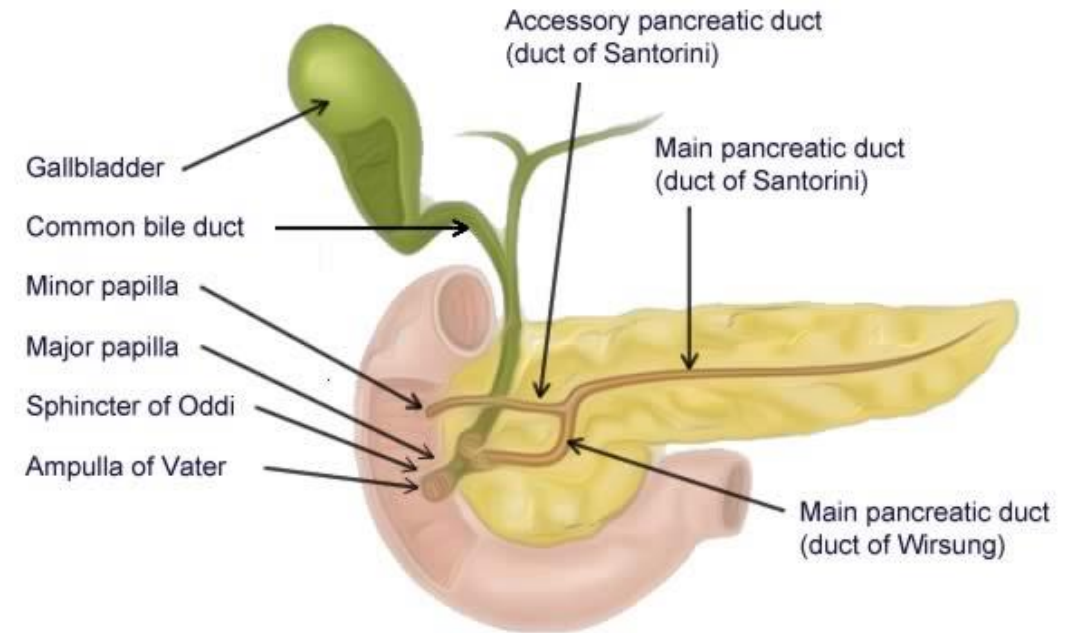
Introduction

- ERCP is an endoscopic technique for diagnosing and treating biliary and pancreatic diseases.
- Combines endoscopy and fluoroscopy.
- Used for both diagnostic and therapeutic purposes.



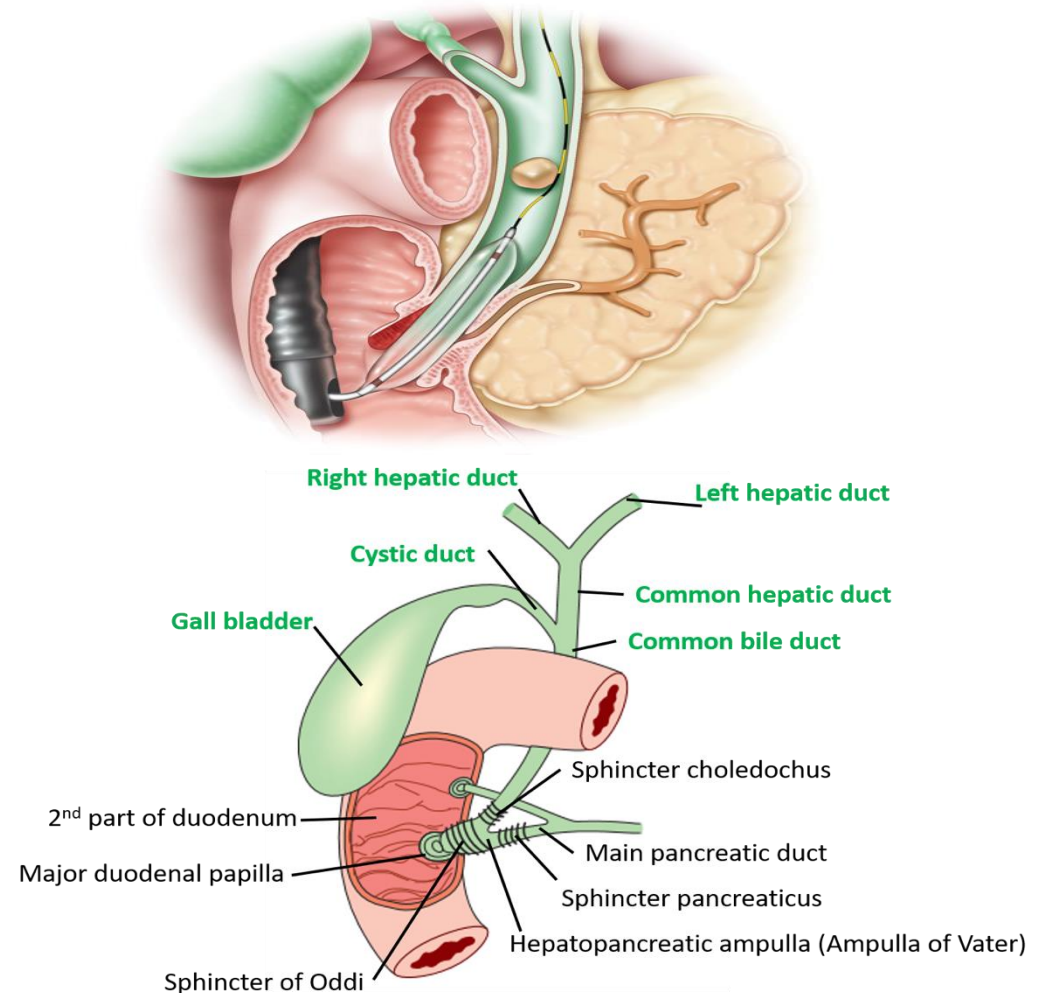
Anatomy Review

- **Biliary Tree:** Common bile duct, hepatic ducts.
- **Pancreatic Duct:** Drains pancreatic enzymes into duodenum.
- **Sphincter of Oddi:** Controls flow into duodenum.



Indications

- Choledocholithiasis (bile duct stones)
- Biliary or pancreatic strictures
- Tumors of pancreas or biliary tree
- Postoperative bile leaks
- Chronic pancreatitis with duct obstruction

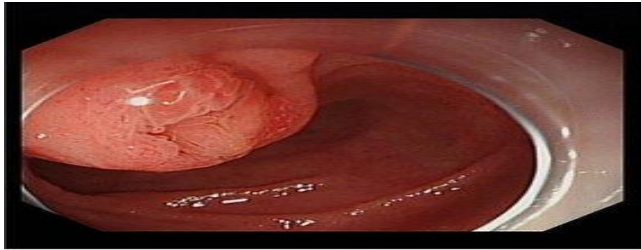


Contraindications

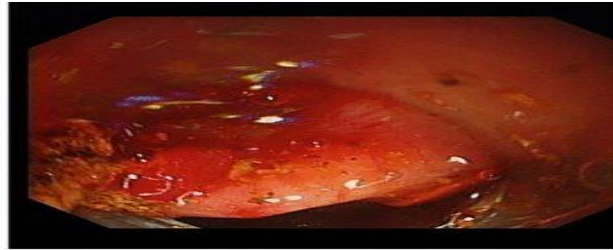
- Acute pancreatitis
- Severe coagulopathy
- Allergy to contrast material
- Unstable patient condition (severe cardiopulmonary disease)

Procedure Steps

- 1. Patient preparation: fasting, antibiotics, sedation/anesthesia
- 2. Endoscope insertion through mouth to duodenum
- 3. Cannulation of bile/pancreatic ducts
- 4. Injection of contrast dye
- 5. Fluoroscopic imaging
- 6. Therapeutic intervention (stone removal, stent placement)



A



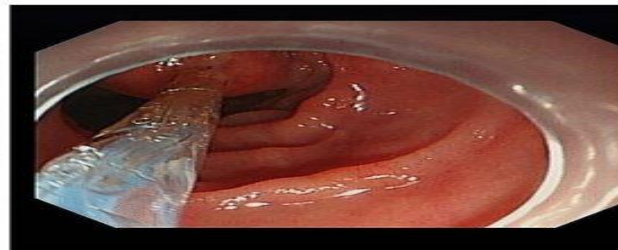
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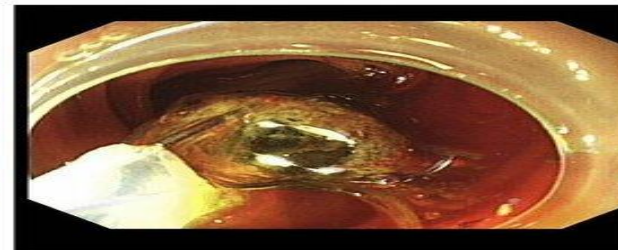
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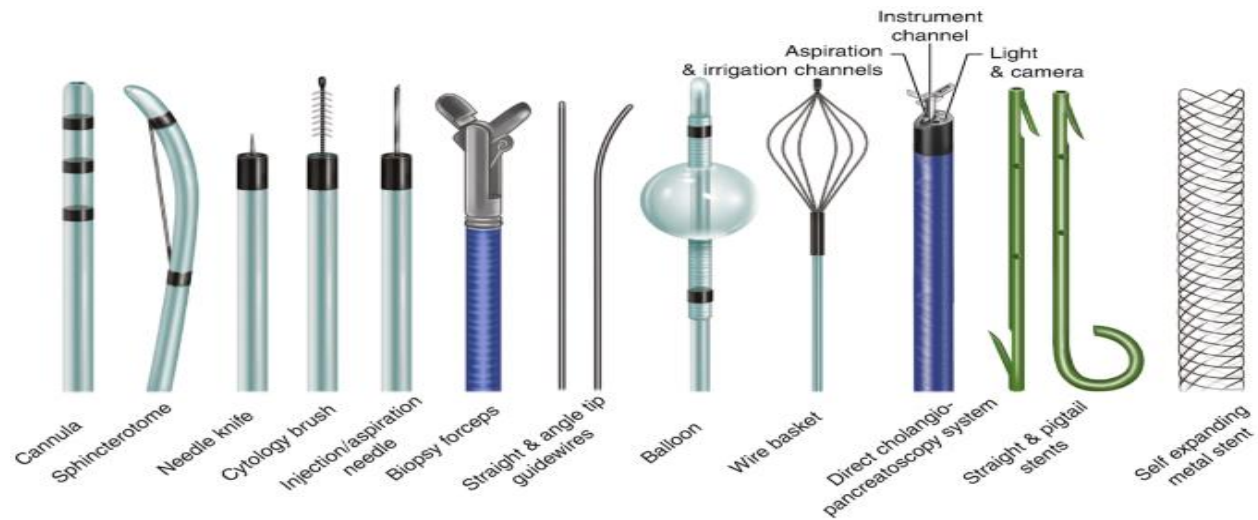
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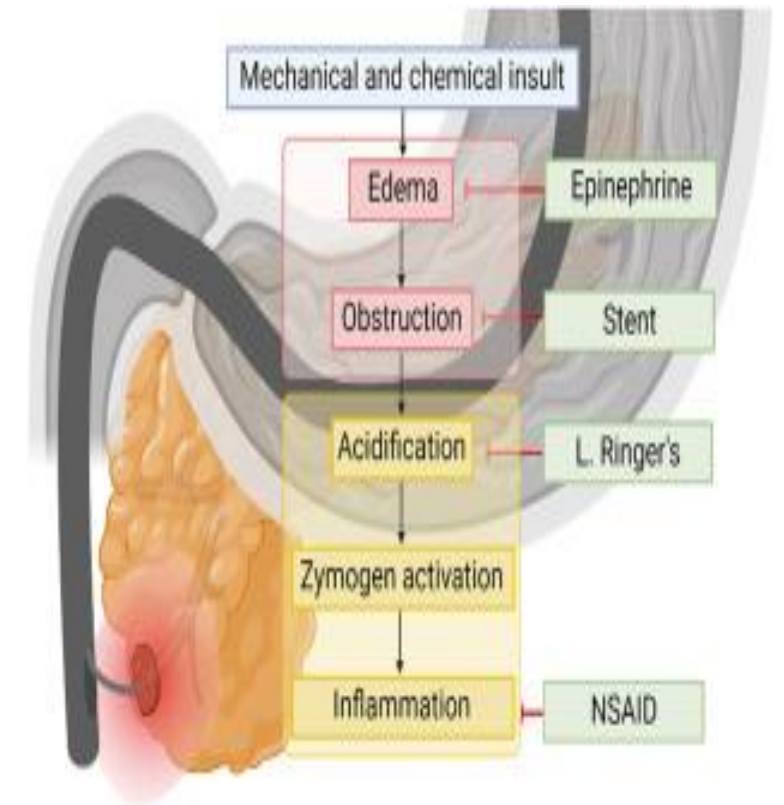
Equipment

- Side-viewing duodenoscope
- Cannulation catheters
- Guidewires
- Contrast medium
- Fluoroscopy



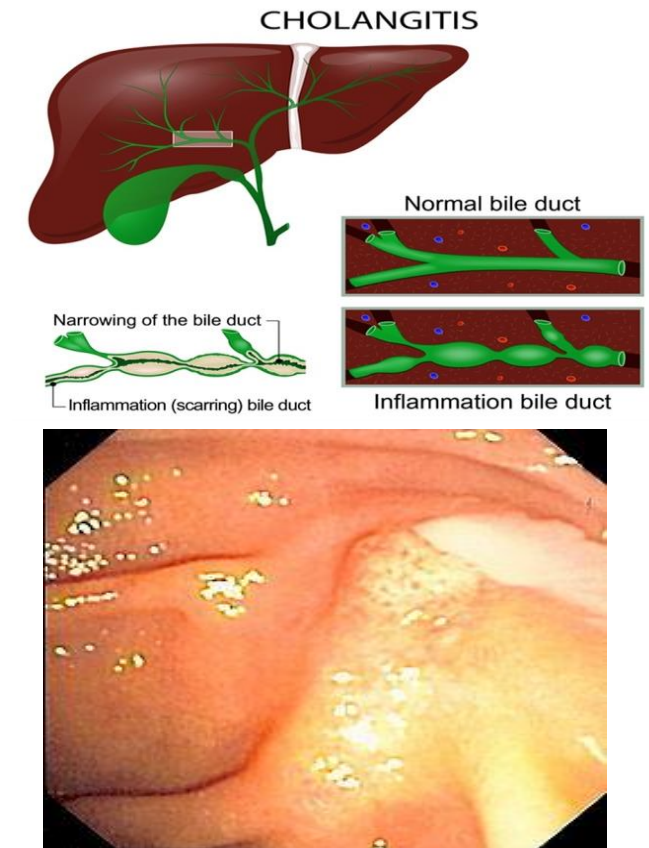
COMPLICATIONS

- **Post-ERCP pancreatitis : PEP** is an inflammation of the pancreas that occurs after an ERCP procedure.
- PEP is diagnosed by new-onset abdominal pain with pancreatic enzyme (amylase or lipase) levels three times higher.
- PEP can lead pancreatic necrosis and organ failure.
- **Hemorrhage:** most common caused by endoscopic sphincterotomy, primary treatment, including epinephrine injection, thermal or mechanical methods (like clips), or balloon tamponade.



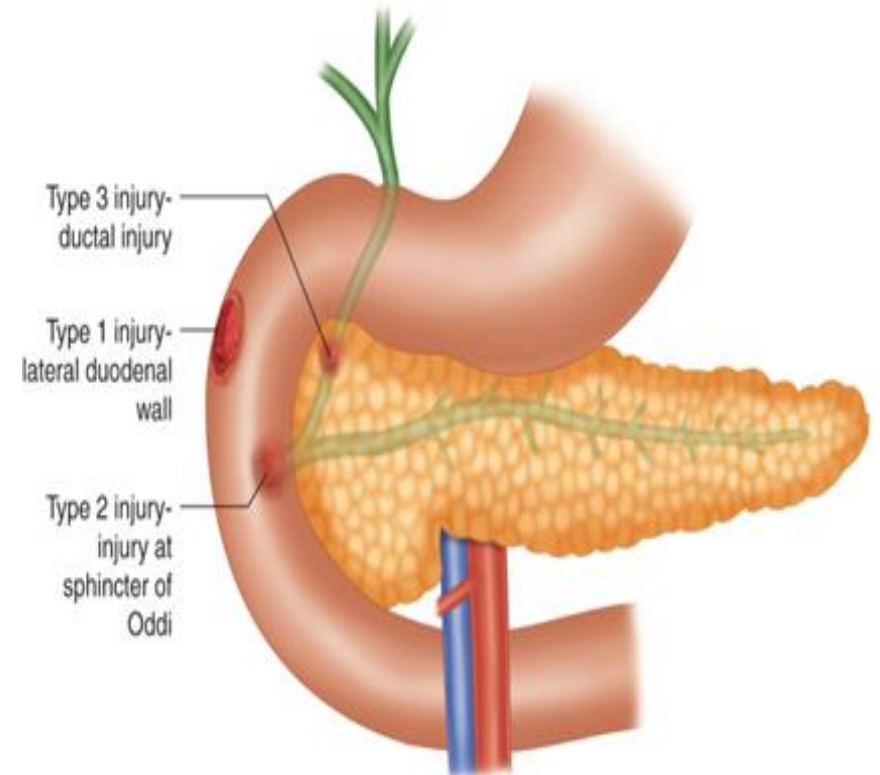
COMPLICATIONS

- **Cholangitis:** - is swelling (inflammation) of the bile duct system that results from infection.
- fever, abdominal pain, or jaundice
- caused by a bacterial infection.(E.coli, Klebsiella and Enterococcus)
- immediate supportive care with intravenous fluids and broad-spectrum antibiotics, followed by urgent biliary drainage to relieve the obstruction. Endoscopic retrograde

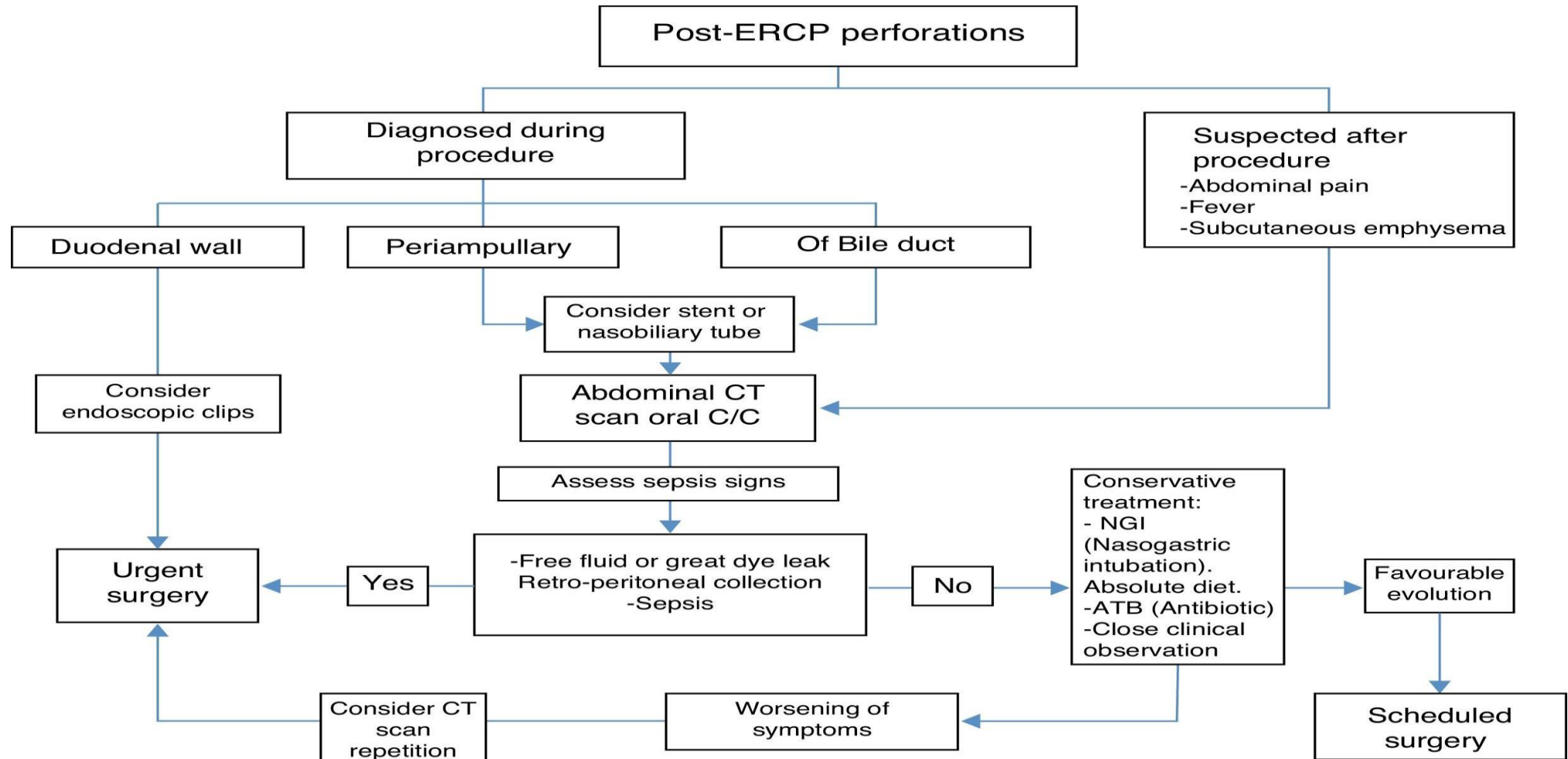


COMPLICATIONS

- **Perforation** of duct or duodenum
- Perforation is a rare but serious complication of the ERCP procedure.
- Management of ERCP perforations depends on the severity and location, and typically involves a combination of conservative (non-surgical) and surgical approaches, ideally initiated early.



COMPLICATIONS



Nursing Responsibilities: Pre-procedure

- Verify patient identity and consent.
- Check allergies (especially to contrast and iodine).
- Ensure NPO status for 6–8 hours.
- Review coagulation profile and medications.
- Assist in patient education about the procedure.



Nursing Responsibilities: Intra-procedure

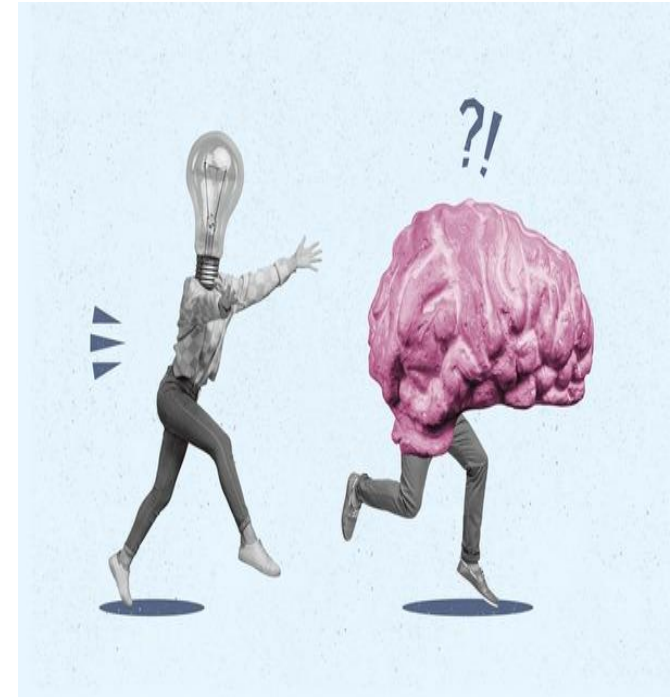
- Assist in patient positioning (usually prone or left lateral).
- Monitor vital signs and sedation level.
- Ensure sterility of accessories.
- Support endoscopist with accessories and suction.
- Record procedure details.

Nursing Responsibilities: Post-procedure

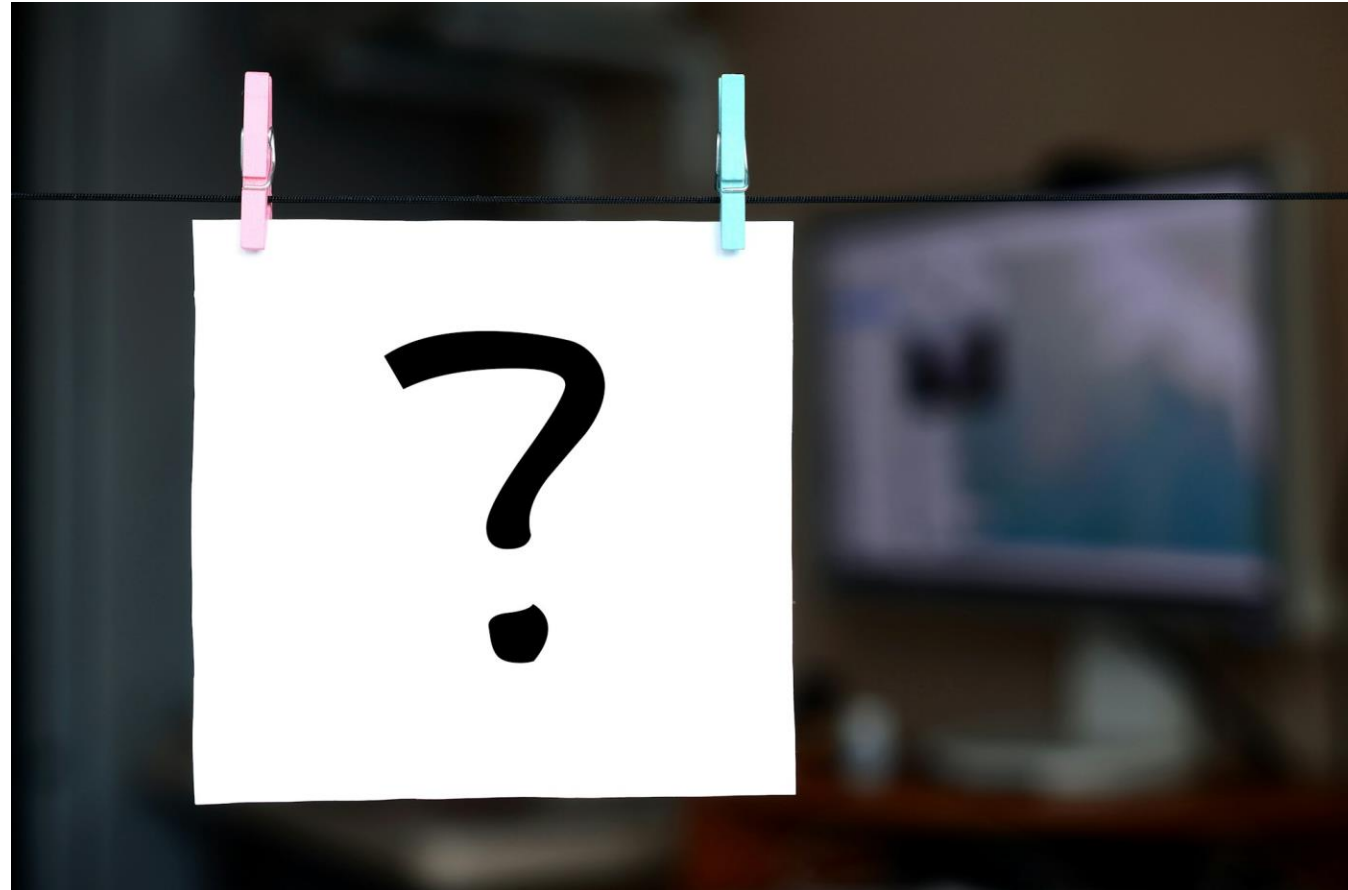
- Monitor patient recovery and consciousness.
- Assess for complications (bleeding, pain, pancreatitis).
- Ensure NPO until gag reflex returns.
- Provide post-procedure education and discharge instructions.

Conclusion

- - ERCP is a powerful tool for diagnosis and treatment.
- - Success depends on patient selection and operator expertise.
- - Early recognition and management of complications are essential.



QUESTION TIME



References

- ASGE Standards of Practice Committee, 2024.
- Joint Commission International (JCI) Guidelines, 2024.
- Hospital Endoscopy Unit Protocols.

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