

The role of endoscopic retrograde
cholangiopancreatography (ERCP) in
acute pancreatitis

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Acute Pancreatitis

- ▶ Can occur at any age
- ▶ Most commonly occurs in 3rd to 6th decade of life
- ▶ Early presentation (1st decade of life) think about ((hereditary, infection or trauma))

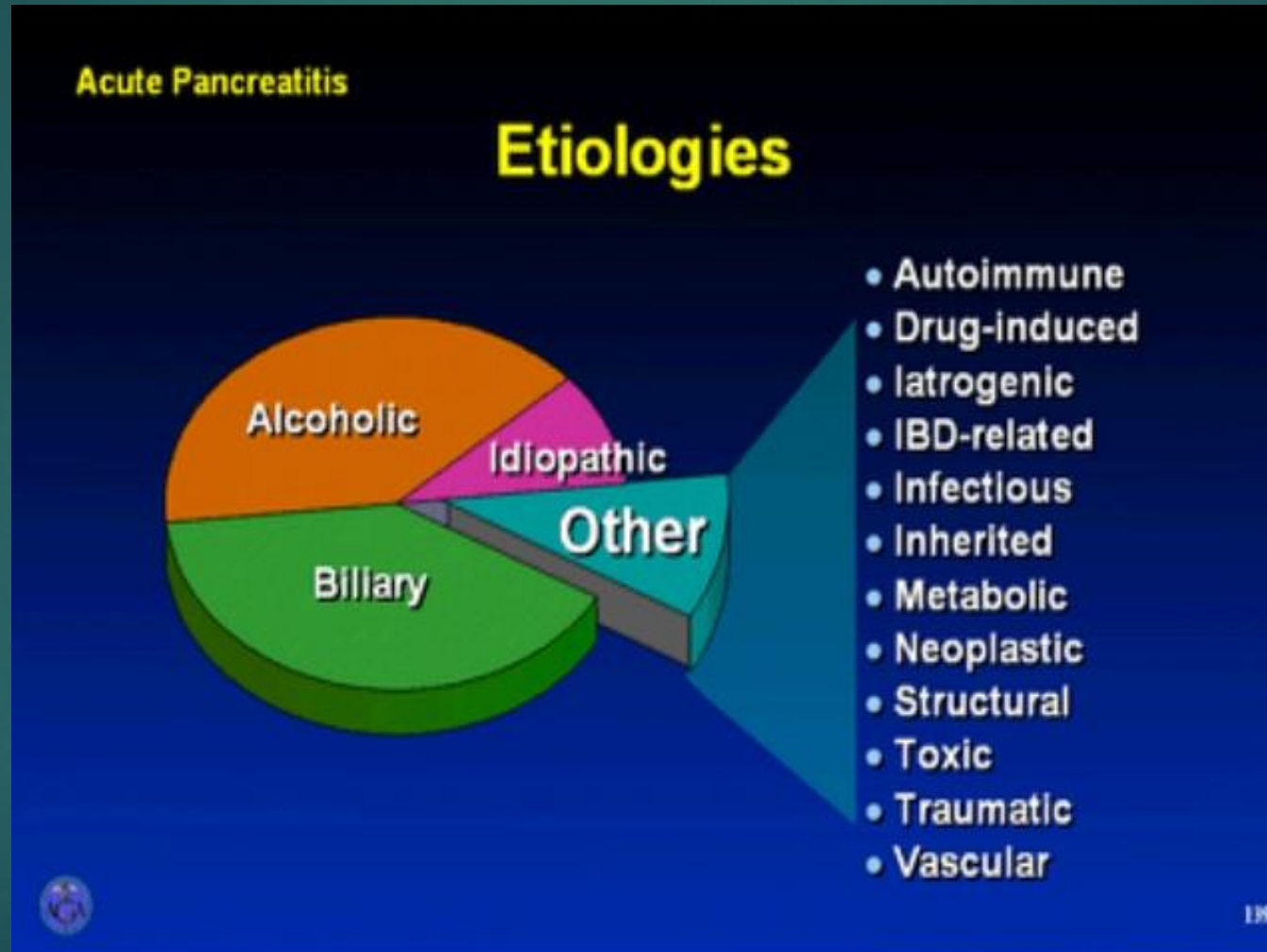
- ▶ **Mild** “edematous” pancreatitis
 - Minimal organ dysfunction
 - Uneventful recovery in 5-7 days

- ▶ **Severe** “necrotizing” pancreatitis
 - Multisystem organ failure (Acute respiratory distress syndrome, Acute tubular necrosis of the kidney, Disseminated intravascular coagulation, Sepsis)
 - Abscess and pseudocyst formation
 - Duodenal obstruction
 - Mortality ~10%

Acute Pancreatitis Etiology

- Alcohol
 - Gallstones
 - Metabolic disorders (hyperlipidemia, hypercalcemia)
 - Medications
 - Infections:
 - Viral: Mumps, coxsackie, hepatitis B, CMV, varicella-zoster, HSV, HIV
 - Bacteria: mycoplasma, Legionella, Leptospira, salmonella
 - Fungi: Aspergillus
 - Parasites: Toxoplasma, cryptosporidium, Ascaris
 - Trauma/post-procedural
 - Vascular/shock
 - Congenital: Pancreatic divisum
 - Genetic: Cystic Fibrosis, alpha-1 antitrypsin deficiency
- Account for most cases (60-75%)

Acute Pancreatitis Etiology



The role of ERCP in acute pancreatitis

- ▶ The role of urgent endoscopic retrograde cholangiopancreatography (ERCP) in acute pancreatitis is for many years a subject for **disagreement** among physicians. Although the evidence seemed to be in favor of performing ERCP, endoscopists usually **hesitate** to conform to the guidelines.

What are the indications for ERCP with AP ?

- ▶ According to the ASGE, indications for ERCP with acute pancreatitis disease are for the assessment and treatment of:
 - ▶ • ACUTE **BILIARY** PANCREATITIS.
 - ▶ • Symptomatic **idiopathic** pancreatitis.
 - ▶ • Recurrent acute pancreatitis of **unknown** etiology.
 - ▶ • Symptomatic pancreatic pseudocysts or pancreatic fluid collections (benign)
 - ▶ High suspect of pancreas or biliary ducts **tumors** that present with acute pancreatitis.

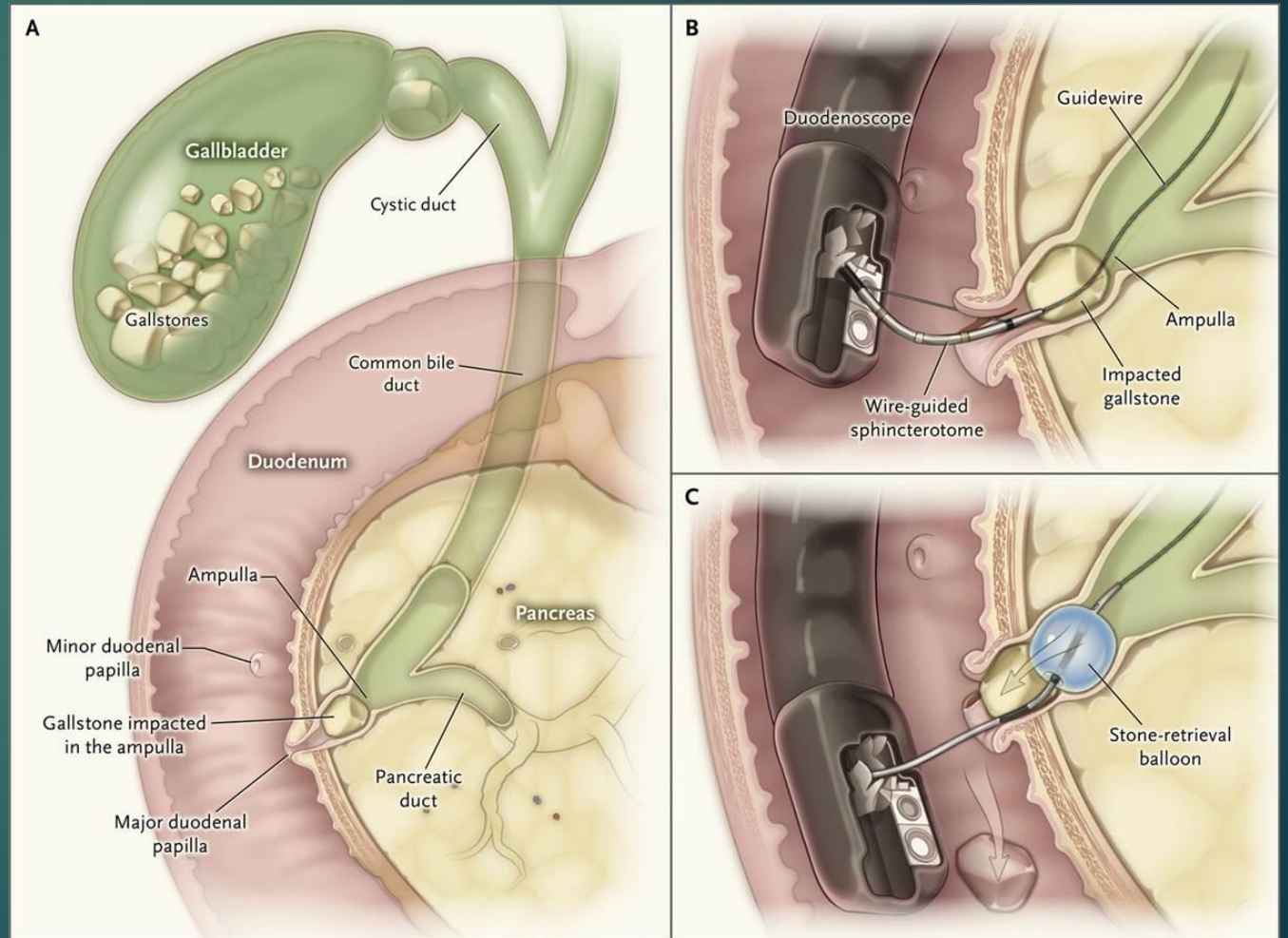
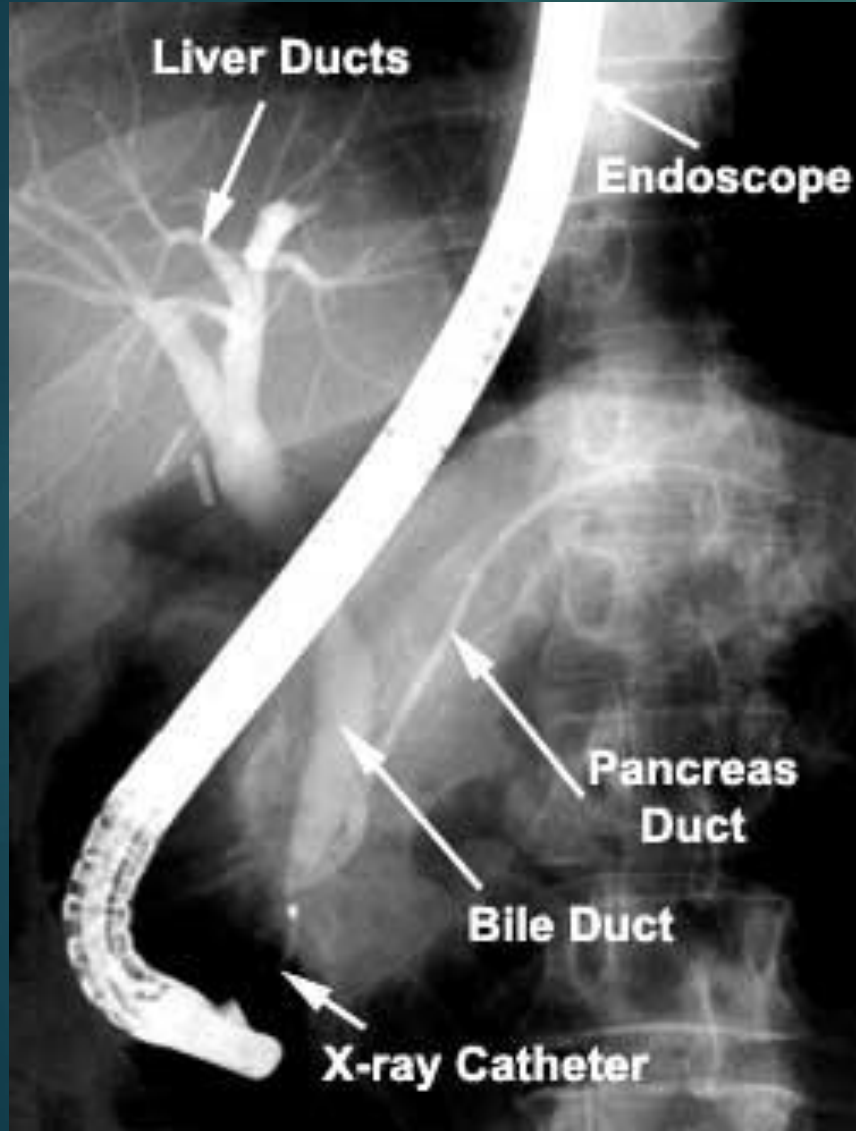
Acute biliary pancreatitis

- ▶ The pathogenesis of acute biliary pancreatitis is attributed to transient **obstruction** of the bile and pancreatic duct, which causes **reflux** of bile and duodenal content in the pancreatic duct **or/and** increases the **hydrostatic pressure** in the pancreatic duct

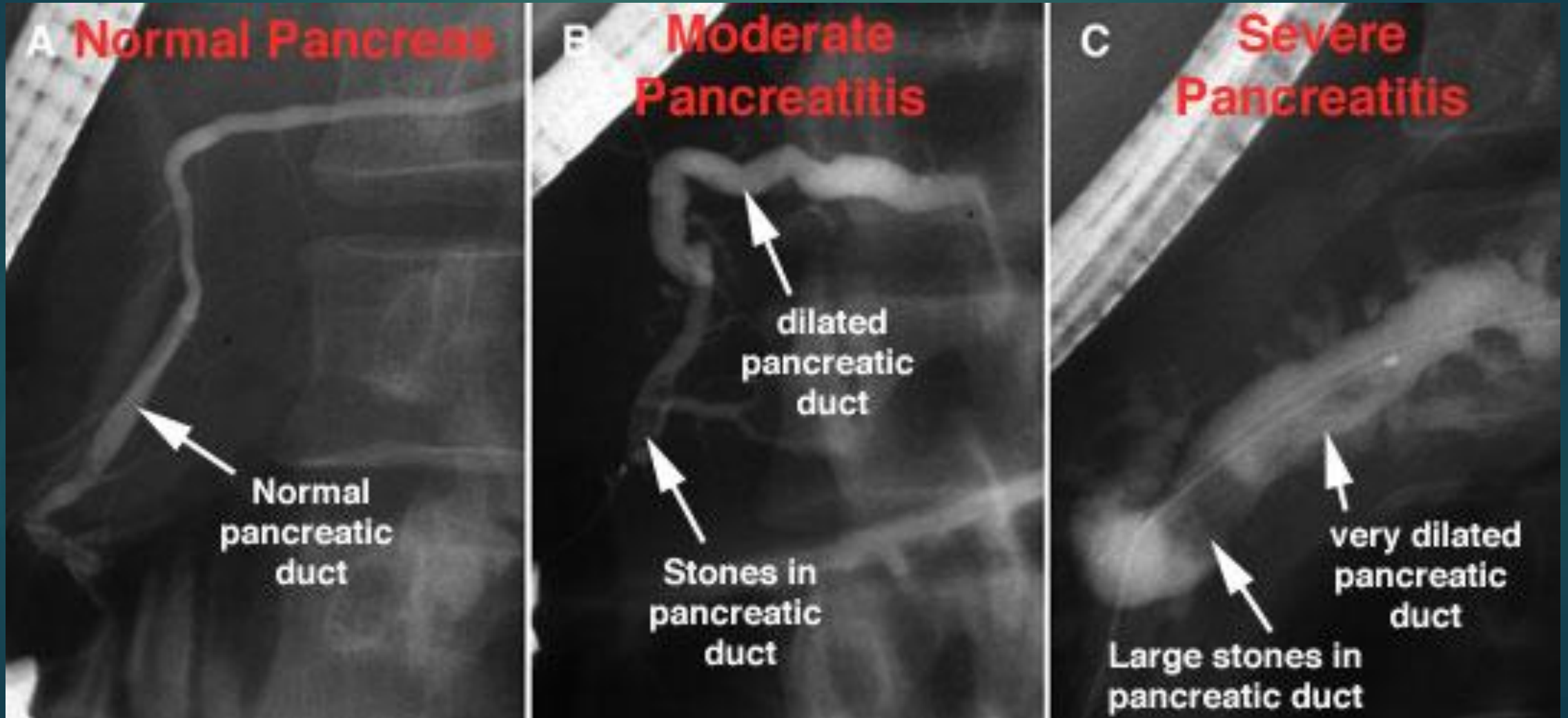
Acute biliary pancreatitis

- ▶ Ercp is the **golden choice** in pancreatic duct stones that proved by abdomen us or msct or mrcp regardless any other biliary ducts dysfunction .
- ▶ ERCP is performed within **24 to 48** hours after presentation in patients with acute disease and symptoms or signs of coexisting **cholangitis** (e.g..... pain , fever, jaundice, and septic shock) or persistent of **biliary obstruction** (a conjugated bilirubin level >5 mg per deciliter [86 micromoles per liter]). Intervention with ERCP is also considered in patients who have **clinical deterioration** (e.g., worsening pain, leukocytosis, and a change in vital signs) and increasing liver-enzyme levels. Finally, if radiologic imaging such as abdominal ultrasonography or computed tomography shows a **stone in the common bile duct**, ERCP should be performed.

Acute biliary pancreatitis



Acute biliary pancreatitis



Role of ERCP in Idiopathic Recurrent Acute Pancreatitis.

- ▶ Recurrent acute pancreatitis (**RAP**) is defined based on the occurrence of **two or more** episodes of acute pancreatitis.
- ▶ RAP is **differentiated** from chronic pancreatitis based on the presence of a normal morphological appearance of the pancreas between episodes.
- ▶ RAP can be due to a variety of etiologies including common bile duct stones or **sludge**, sphincter of Oddi dysfunction (**SOD**), pancreas divisum (**PD**), anomalous pancreaticobiliary junction, genetic mutations, and alcohol related. In approximately 30 % of patients, the etiology of RAP is unclear and the term "idiopathic" is used.
- ▶ Endoscopic retrograde cholangiopancreatography (ERCP) can be utilized in both the **diagnosis and the initial management of RAP**, but it has known limitations and risks.

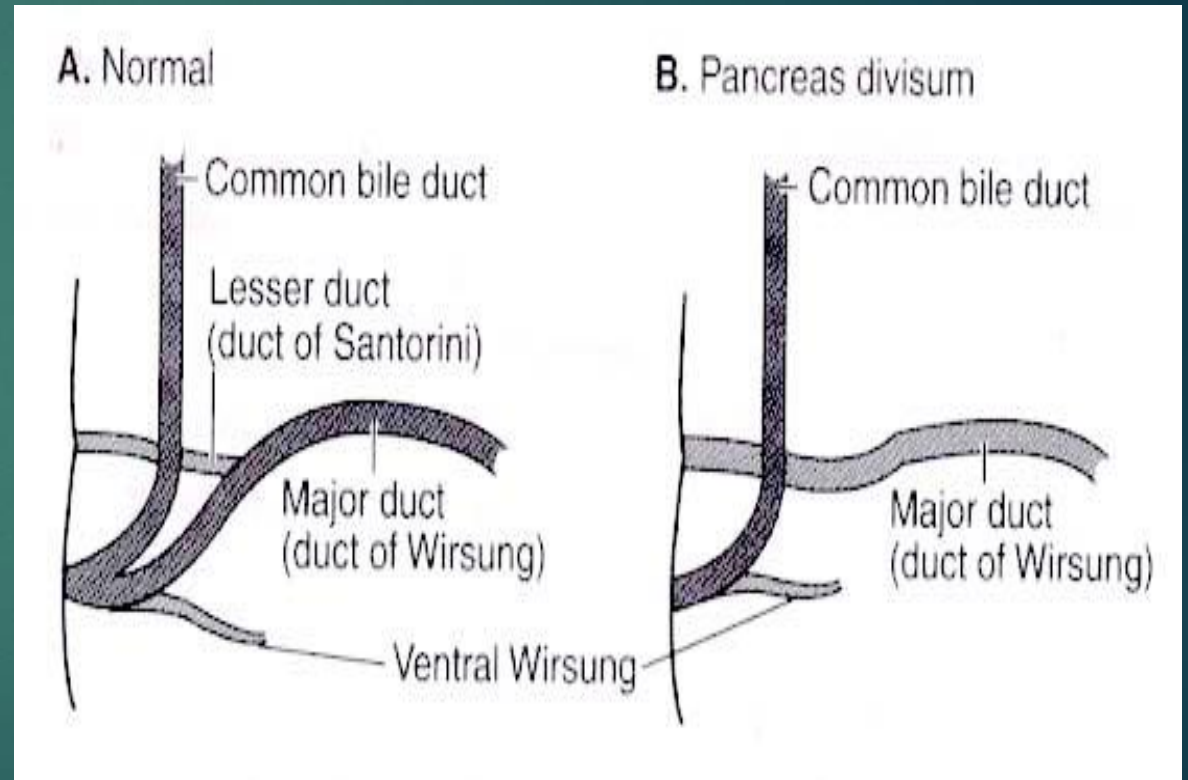
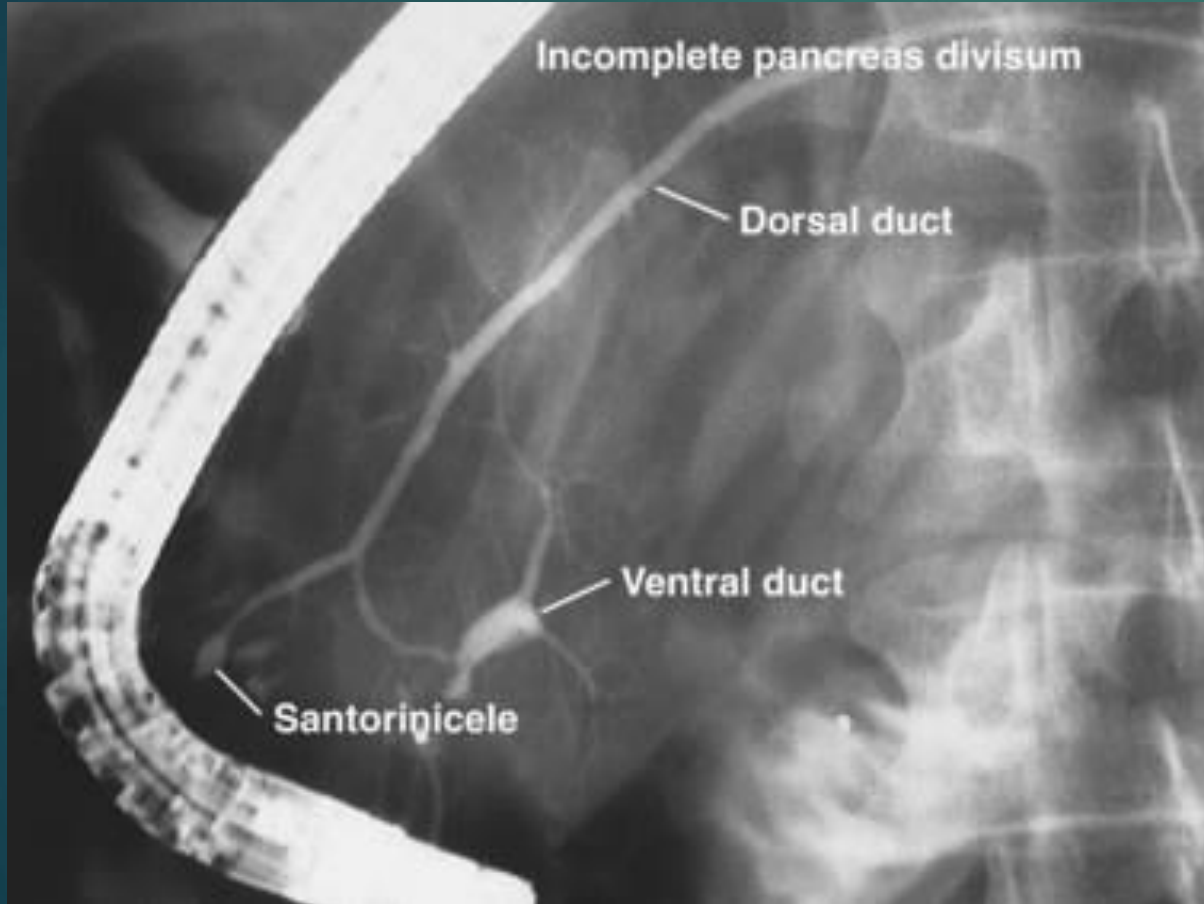
Role of ERCP in Idiopathic Recurrent Acute Pancreatitis.

Table 1. Potential endoscopic diagnoses for idiopathic acute pancreatitis

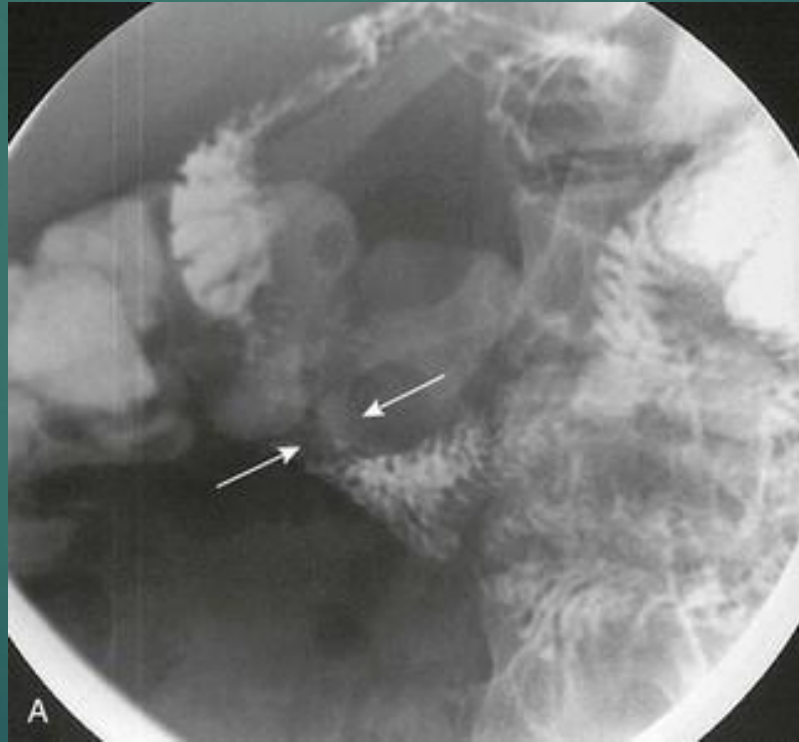
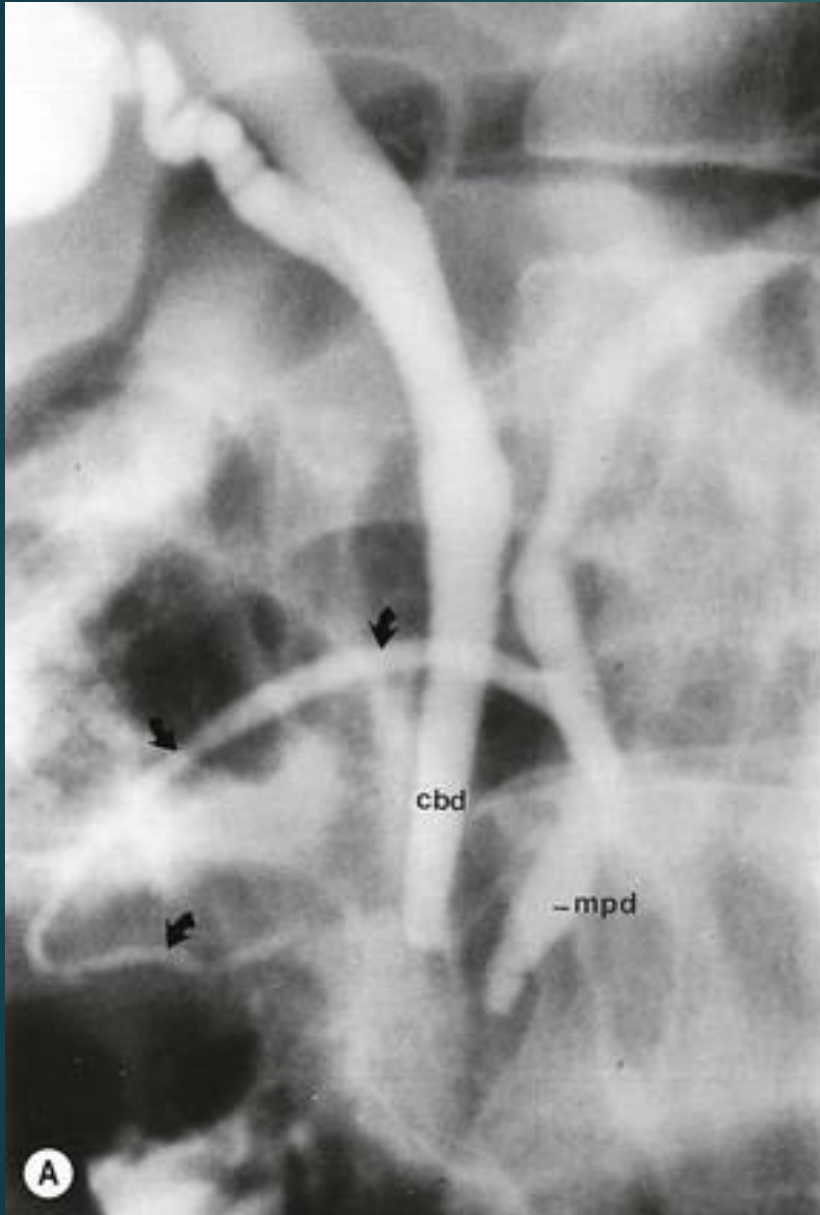
Biliary stones/microlithiasis
Sphincter of Oddi dysfunction
Congenital variants
Pancreas divisum
Annular pancreas
Anomalous pancreaticobiliary union/CD cyst
Gastric/duodenal duplication
Congenital duodenal web
Neoplasms
Ampullary
IPMN
Ductal adenocarcinoma
Islet cell/metastatic tumors
Miscellaneous
Duodenal diverticulum

CD, Choledochal cyst; *IPMN*, intraductal papillary mucinous neoplasm.

Divisum pancreas



Annular pancreas



Summary

- ▶ We have to remember these **3 key words** to make decision of do ERCP in acute pancreatitis:
- ▶ 1- the **time** of onset.... the **golden period** up to 72 hours.
- ▶ 2- the presence of **obstructive biliary ducts or cholangitis**
Check up by Ultrasound ,MSCT or MRCP
- ▶ 3- the **severity** of pancreatitis.... Use ((Ranson , Glasgow-Imrie or APACHE II)) scores to predict the severity.

References

- ▶ ASGE | American Society for Gastrointestinal Endoscopy | **ASGE**
- ▶ The World Journal of Gastrointestinal Endoscopy (**WJGE**)
- ▶ **Uptodate** 2018
- ▶ Journal of the pancreas (**JOP**)
- ▶ The new England journal of medicine (**NEJM**)

Thank you for listening



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