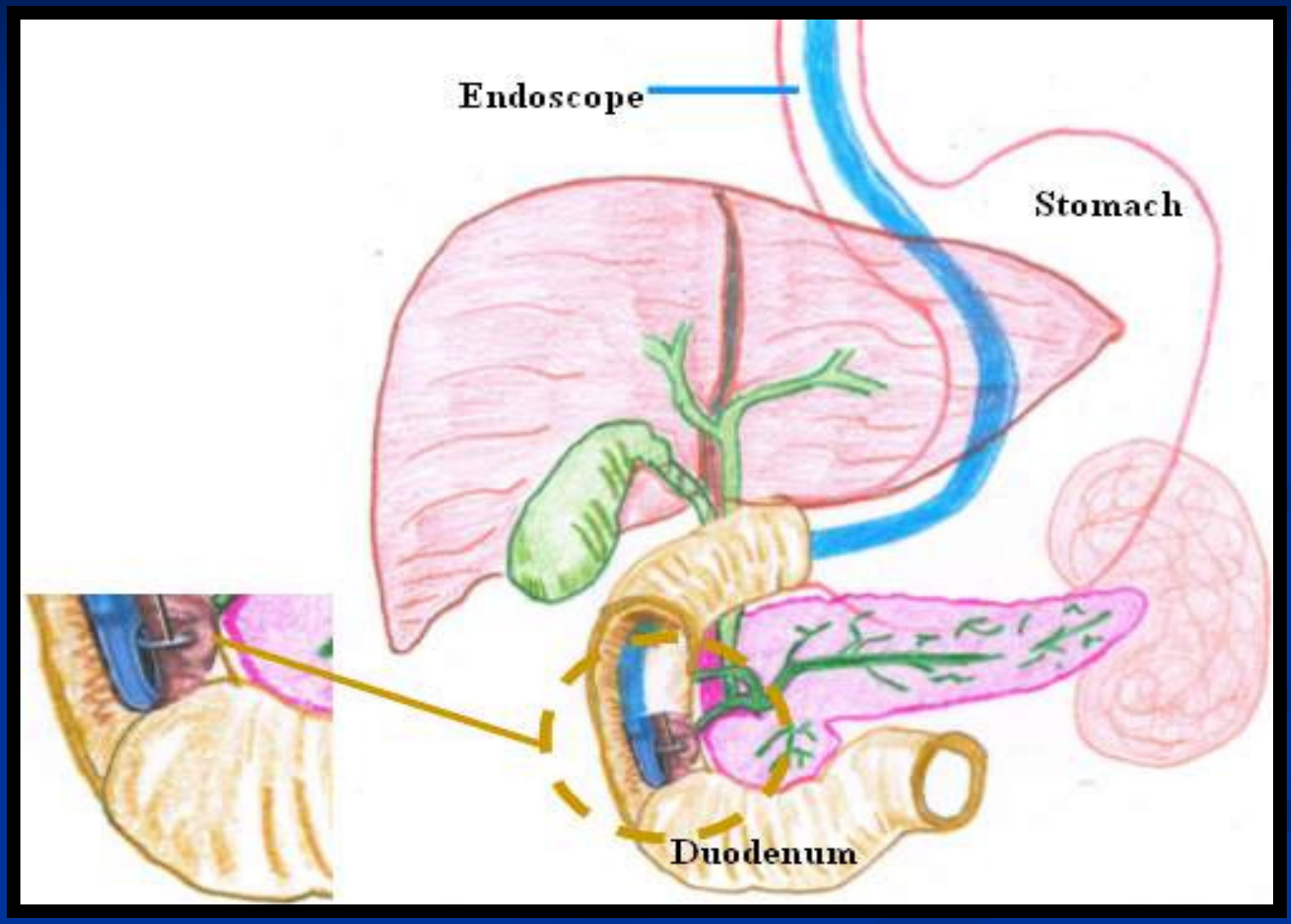
ENDOSCOPIC RETROGRADE CHOLANGIOPANCREATOGRAPHY (ERCP)

Gastroenterology Department

INTRODUCTION



CASE STUDY

- Girl, 7 years old
- Chief complaint: acute upper abdominal pain
- History:
  - 1 weeks: epigastric pain, vomitting, not fever
- Physical examination
  - Epigastric tender, discomfort.
  - No jaundice

LABORATORY TESTS

- Bili T/ Bili D: 9/ 5 (mg/ L)
- AST/ ALT: 98/ 53 (UL)
- Amylase: 667 (UL)
- Lipase: 646 (UL)

Diagnostic Image

- Abdominal ultrasound:
  - Dilatation of common bile duct (D# 12 mm)
  - Dilatation of duct of Wirsung (d# 6mm) with small stone
  - Impacted stone at the ampulla, d# 14x 9mm
  - No ascites

CT scan

- Contour show irregularity, heterogeneous enhancement, calcification
- Enlargement of the pancreas with small stone d# 5mm
- Ampullary edema spread to D2 of duodenum

Discussion

- How's about the technical outcomes and complications of ERCP in children?
- What is indication for ERCP in children?
- Recommendations for ERCP in acute pancreatitis?
- Potential role of ERCP at Children's Hospital No2?

Technical outcomes and complications of ERCP in children

Varadarajulu S[1], Wilcox CM, Hawes RH, Cotton PB

The aim of this study was to compare the success and complications of diagnostic and therapeutic ERCP in children (age <18 years) and adult patients.

METHODS

- A retrospective case-controlled study was conducted in which all children undergoing ERCP at two centers (1994-2002)

RESULTS

- A total of 116 children (mean age 9.3 years, range 1 month to 17 years; median age 8.1 years) and 116 matched adult patients (mean age 56.3 years, range 20-83 years; median age 49.7 years) underwent 163 and 173 ERCP procedures, respectively.

RESULTS

- According to procedure complexity grade, each group included the same number of patients, grade I, 72 patients; grade II, 12 patients; and grade III, 32 patients.

RESULTS

- Procedure success rate was 97.5% in children vs. 98% in the adult cohort (p= not significant).
- The complication rate was not significantly different between children and adult patients (3.4% vs. 2.5%).

CONCLUSIONS

- When ERCP is performed in children by expert endoscopists, the success rate is high and the complication rate is low, both being comparable with those for ERCP in adult patients.

Biliary disorders evaluated by ERCP

- Congenital:
  - Biliary atresia
  - Alagille syndrome*
  - Caroli disease*
  - Biliary cysts
  - Biliary strictures
  - Bile plug syndrome
  - Malignant biliary strictures
  - Common bile duct complications after liver transplantation

Biliary disorders evaluated by ERCP

- Acquired:
  - Sclerosing cholangitis
  - Ascariasis choledocholithiasis
  - Bile plug syndrome
  - Malignant biliary strictures
  - Common bile duct complications after liver transplantation

ERCP for pancreatic disorders in children

- Pancreatitis
  - Nonresolving acute
  - Idiopathic recurrent
  - Chronic persistently elevated pancreatic enzymes
- Evaluation of abnormalities on ultrasound, CT or MRCP
- Pancreatic pseudocysts
- Pancreatic trauma Pancreatic ascites Pancreatic duct leaks
- Pancreatic duct obstruction (eg, stone or stricture)

THERAPEUTIC PROCEDURES

1. Endoscopic nasal drainage
2. Biliary sphincterotomy
3. Pancreatic sphincterotomy
4. Stone extraction
5. Stent insertion
6. Balloon dilatation
7. Endoscopic drainage of pseudocyst

CONTRAINDICATION

1. Perforation of a hollow viscus
2. Shock, cardiopulmonopathy
3. Cervical spine injury
4. Intestinal obstruction
5. Pancreatistis,cholangitis
6. Esophageal stricture,postoperative changes in anatomy, large paraesophageal hernia

Endoscopy for the treatment of acute gallstone pancreatitis

Tse F, Yuan Y, 16 May 2012

- This review compared the effect of the two treatment strategies in patients with acute gallstone pancreatitis.
- Seven studies, with a total of 757 patients, were reviewed and provide the best available evidence

- The early ERCP strategy does not reduce death or complications compared to the early conservative management strategy in patients with acute gallstone pancreatitis, regardless of the severity of the attack.
- However, early ERCP may be beneficial in patients who have infection of the bile duct or bile duct blockage.

RECOMMENDATIONS for ERCP in acute pancreatitis

- Patients with acute pancreatitis and concurrent acute cholangitis should undergo ERCP within 24 h of admission (strong recommendation, moderate quality of evidence).
- ERCP is not needed in most patients with gallstone pancreatitis who lack laboratory or clinical evidence of ongoing biliary obstruction (strong recommendation, low quality of evidence).

RECOMMENDATIONS for ERCP in acute pancreatitis

- In patients with gallstone pancreatitis, we early ERCP and sphincterotomy for those who have a high suspicion of cholestasis and those with cholangitis (Grade 1B). Cholecystectomy should be performed after recovery in all patients with gallstone pancreatitis.

PROSPECT AT CHILDREN'S HOSPITAL No2

January 2010-January 2014

Diagnostic	Patients
Acute pancreatitis	125
Recurent acute pancreatitis	14
Chronic Pancreatitis	7
Pancreatic pseudocysts	34
Choledocholithiasis	55
Total	235

REFERENCES

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Thank you!