THE ROLE OF ERCP IN PSC

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ENDOSCOPIC RETROGRADE CHOLANGIO-PANCREATOGRAFICATION (ERCP)

PERCUTANEOUS TRANSHEPATIC CHOLANGIOGRAPHY (PTC)
The Evaluation for Suspected Biliary Obstruction

**Normal Examination**
- Further evaluation of Medical Cholestasis

**Obstruction**
- MRCP (or US/CT)
- Directly to Surgery
  - rarely

**ERCP (diagnosis +/- management)**
- PTC (diagnosis +/- management)
- Surgery (management)

**Surgery (management)**
Perform the Procedure in a Safe Setting

- Trained and experienced staff
- Adequate back-up
- Complete medical resuscitation of patient
- Slow and methodical sedation
- Don't be rushed
- Liberal use of anesthesiologist
NORMAL CHOLANGIOGRAM & GB
CHOLEDOCHOLITHIASIS
Endoscopist: James W Ostroff MD

UCSF MEDICAL CENTER

MANUEL MORON
12795165
Dec 4, 1992

Choledocholithiasis

Choledocholithiasis

Choledocholithiasis

Choledocholithiasis

13

14

15

16
Cytological Diagnosis of Malignancy

Sensitivity

- Specimen from Bile Duct: 50-80% Cholangio, 35% Pancreas
- Specimen from Pancreatic Duct: 50% pancreatic Cancer

Limitations

- sampling, rapid preservation, desmoplastic tumor, cauterity artifact after a sphincterotomy
- fluid for K-ras mutation ?????
Who Gets Admitted to The Hospital

- Anyone who wants to post procedure
- Anyone who can't drink lots of fluid
- Anyone with pain
- Everyone who is cut with a needle knife or requires a pre-cut
- Everyone who had post ERCP pancreatitis before
PTC vs ERCP
PTC+ ERCP

Complications:

- Pancreatitis
- Cholangitis
- Bleeding
- Retroduodenal Perforation
- Cardio Pulmonary Complications
## ENDOSCOPIC RETROGRADE CHOLANGIO-PANCREATOGRAFHY

Major Early Complications from Diagnostic and Therapeutic ERCP: A Prospective Multi-center Study. Loperfido et al. Gastrointestinal Endoscopy 1998;48:1

<table>
<thead>
<tr>
<th>Major Complications</th>
<th>Death Rate</th>
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<tbody>
<tr>
<td>Diagnostic ERCP (942)</td>
<td>13 (1.38%)</td>
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<td>(0.21%)</td>
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<td>Therapeutic ERCP (1827)</td>
<td>98 (5.4%)</td>
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<td>(0.49%)</td>
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<td>(P &lt; 0.0001)</td>
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COMPLICATIONS AFTER ERCP IN PATIENTS WITH PRIMARY SCLEROSING CHOLANGITIS

Compared complication rate after ERCP in consecutive patients with PSC compared with control patients with biliary strictures who did not have PSC

- RESULTS
  - 85 ERCP’s in 30 patients with PSC
  - 70 ERCP’s in 45 control patients

Complications
  - PSC (11/85) [12.9%] vs Control (6/70) [8.6%] (little difference) P=0.45
  - PSC complications (with acute symptoms 7/24 [29.2%])
    - PSC complications (elective 4/61 [6.6%]) (significant) P=0.01

Patients with PSC who had complications had more total and acute ERCP’s

No difference in the rate of complications in diagnostic vs therapeutic ERCP’s

No difference in diagnostic vs therapeutic ERCPs nor stent placement and dilation-only therapeutic ERCP

Complications after ERCP in patients with primary sclerosing cholangitis.
GastrointestEndosc. 2008; 67(4):643-8 (ISSN: 0016-5107)Etzel JP; Eng SC; Ko CW; Lee SD; Saunders MD; Tung BY; Kimmey MB; Kowdley KV Department of Medicine, University of Washington Medical Center, Seattle, Washington, USA.
ENDOSCOPIC MANAGEMENT OF PRIMARY SCLEROSING CHOLANGITIS (PSC) RESULTS IN SLOWING OF DISEASE PROGRESSION

- Endoscopic sphincterotomy and balloon dilation without stent placement was used in symptomatic patients with multifocal PSC with extrahepatic and intrahepatic strictures.

- Dilation was attempted to secondary branches of the right and left lobe and dominant extrahepatic strictures with 4 mm and 6 mm balloons.

- PSC patients were compared with PSC patients awaiting transplantation who did not undergo therapeutic intervention. Endpoints were transplant, death, Child-Pugh score and the modified Mayo score

**RESULTS**

- 17 patients underwent 127 ERCP’s with dilation
  - 1 episode of pancreatitis, no perforations or cholangitis
  - trend toward slower progression in the dilated group

N= 104 patients with PSC underwent 204 ERCP’s

- 56 were diagnostic ERCP’s
- Clinical improvement seen in 35% after diagnostic and 70% after therapeutic ERCP’s
  LFT’s: aspartate aminotransferase, alanine aminotransferase and alkaline phosphatase improve after diagnostic and therapeutic ERCP’s
- Serum Bilirubin levels decreased only in the therapeutic group
  (may be a more sensitive indicator of success in therapy)

RESULTS:

Dominant strictures, endoscopic therapy and high serum bilirubin were predictors of successful clinical and laboratory improvement

Total complication rates were equivalent between diagnostic and therapeutic ERCP’s……BUT severe complications were more common in the therapeutic group

Predictors of successful clinical and laboratory outcomes in patients with primary sclerosing cholangitis undergoing endoscopic retrograde cholangiopancreatography. Eloubeidi, Mergener, Jowell, Branch and Baillie

Can J Gastro 2003 Apr; 17 (4): 243-8
37y.o. Man Presenting with:

- jaundice
- liver failure

• Hx: Ulcerative Colitis and Sclerosing Cholangitis.

• Progressive liver failure with both intrahepatic disease and dominant strictures of the extrahepatic biliary tree.

• Lab:

  Bilirubin 22, Ca 19-9 1850
SUMMARY

• Diagnostic ERCP’s
  - To make diagnosis
  - Staging of disease
  - Cytology to exclude cholangiocarcinoma

• Therapeutic ERCP’s (dilations)
  - Part of a multidisciplinary approach
  - End point established
  - “Bridge” to Liver transplantation