Case Presentation

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Patient, Shia MF, a 37 y/o female, 3229898-9

C.C.: Sudden onset of epigastric pain followed by nausea and vomiting 2+ months ago

P.I.: She has been suffering from the above symptoms on and off for 3 years. This time, the symptoms became more severe. Besides, fever and yellowish skin discoloration, elevation of amylase and lipase were also noted. After internal stenting of the distal CBD, the jaundice and fever subsided.

CEA and CA19-9: were normal. Other lab. data were not remarkable.
What are the findings by ERCP?
What’s your impression by ERCP?
What’s your diagnosis by CT and ERCP?
Does MRCP give you more information?
Do you want to change your diagnosis?
How do you treat the patient?
Surgical Treatment for Choledochocoele

Opened ampulla of Vater

CBD

PD
Surgical Treatment for Choledochocoele

- Opening of choledochocoele
- Opened ampulla of Vater
- CBD
- PD
- Choledochocoele
Surgical Treatment for Choledochocoele
Surgical Treatment for Choledochocele

Choledochocele after partial resection
Fig. 82.1 Todani classification of bile duct cysts.

Table 82.1 Distribution of bile duct cysts by type (Todani classification)*

<table>
<thead>
<tr>
<th>Reference</th>
<th>Type:</th>
<th>Number of patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lee et al (1969)b</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flanigan (1975)a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yamaguchi et al (1980)a</td>
<td>659</td>
<td>23 42 19 ?</td>
</tr>
<tr>
<td>Powell et al (1981)a</td>
<td>682</td>
<td>18 12 166 —</td>
</tr>
<tr>
<td>Ono et al (1982)</td>
<td>255</td>
<td>7 13 60 ?</td>
</tr>
<tr>
<td>Deziel et al (1986)</td>
<td>126</td>
<td>1 2 6 4</td>
</tr>
<tr>
<td>Tan &amp; Howard (1988)</td>
<td>18</td>
<td>1 0 1 2 1</td>
</tr>
<tr>
<td>Lopez et al (1991)</td>
<td>126</td>
<td>1 2 5 1 —</td>
</tr>
<tr>
<td>Total</td>
<td>1857</td>
<td>58 86 259 5</td>
</tr>
<tr>
<td>Percentage</td>
<td>82</td>
<td>2.5 4 11 &lt; 1</td>
</tr>
</tbody>
</table>
# Clinical Presentations of Choledochal Cyst

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Children (n =11)</th>
<th>Adults (n =31)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdominal pain</td>
<td>4 (36%)</td>
<td>27 (87%)</td>
</tr>
<tr>
<td>Jaundice</td>
<td>7 (64%)</td>
<td>13 (42%)</td>
</tr>
<tr>
<td>Nausea/vomiting</td>
<td>2 (18%)</td>
<td>9 (29%)</td>
</tr>
<tr>
<td>Fever</td>
<td>2 (18%)</td>
<td>8 (26%)</td>
</tr>
<tr>
<td>Pancreatitis</td>
<td>0</td>
<td>7 (23%)</td>
</tr>
<tr>
<td>Abdominal mass</td>
<td>8 (82%)</td>
<td>4 (13%)</td>
</tr>
</tbody>
</table>

- **Classical triad** = jaundice, mass, pain: 0% - 17%, more in children.
- Symptoms are typically intermittent, as pancreatitis or cholangitis
- Pediatric patients > 80%; Female > male
- 57% - 96% anomalous pancreatobiliary union; >15mm long common channel
- Malignancy: 2.5% - 28% in untreated & 0.7% in treated choledochal cysts, mainly cholangiocarcinoma, due to pancreatic juice reflux and biliary stagnation?
Type I

EXCISION, ROUX-Y
HEPATICOCOEJUNOSTOMY
EXCISION, HEPATICO-
DUODENOSTOMY
Roux-Y choledochocystojejunostomy
Choledochocystoduodenostomy

Type II

EXCISION

Type III

TRANSADUODENAL
EXCISION
Transduodenal sphincteroplasty
Endoscopic sphincterotomy

Type IVA

Extrahepatic component
EXCISION, ROUX-Y
HEPATICOCOEJUNOSTOMY
EXCISION, HEPATICO-
DUODENOSTOMY

Type IVB

Intrahepatic component
Hepatic resection ±
Roux-Y hepatico-
jejunostomy
Transhepatic intubation

Type V

(Varoli's disease)

EXCISION, ROUX-Y
HEPATICOCOEJUNOSTOMY
HEPATIC RESECTION
Roux-Y intrahepatic
cholangiojejunostomy
Transhepatic intubation
Orthotopic liver transplant

Fig. 82.8  Surgical options for the treatment of choledochal cysts. Preferred treatment is in capitals.
Choledochocele

- 1.5% - 4% of all choledochal cysts
- The mean age in patients with diagnosis of choledochocele is 46 y/o
- No sex difference
- Pancreatitis-45%, cholangitis-20%
- Malignancy risk- minimal

Surgical Treatment for Choledochocoele

Figure 14-11. Technique for resection of an obstructing choledochocoele. (A) Duodenotomy at the level of the choledochocoele. (B) Incision into the choledochocoele. (C and D) Excision of choledochocoele after identification of common bile duct and pancreatic duct orifice. (E) Suture approximation of duodenal mucosa to remaining choledochocoele. (F) Transverse suture closure of duodenotomy in two layers.
Questions to be discussed

1. Type II choledochal cyst: Saccular diverticulum of CBD (supraduodenal)?

2. Type III choledochal cyst: Choledochocele (cystic dilatation of intrapapillary CBD)?

3. Type ? choledochal cyst: Intrapancreatic CBD saccular diverticulum?