Biliary Therapy – Are we ready for EUS guidance?

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Introduction

ERCP is the standard treatment of biliary obstruction

Success may be hampered by
- Stenoses, surgically altered anatomy...

Alternatives include
- repeat ERCP
- percutaneous drainage
- surgery
EUS

- FNA puncture of all organs surrounding the GI tract
- Internal drainage of pseudocysts and abscesses
- Linear Echoendoscope with large working channel
Why EUS guided biliary therapy?

**Pro´s**
- same session after failed ERCP
- fewer complications vs. PTBD (pneumothorax, bleeding)?
- fewer complications vs. ERCP (pancreatitis)?
- quality of life
- more physiologic
- because we can

**Con´s**
- little experience
- established alternatives exist
- because we can
EUS biliary access

- transgastric/jejunal into the left intrahepatic bile ducts
- transduodenal into the extrahepatic CBD
- direct drainage with stent
- Rendezvous through the papille with ERCP
transhepatic drainage
extrahepatic bile duct technique
Literature

1 Pat.: first EUS guided transduodenal Drainage
    Giovannini, Endoscopy 2001
4 Pat.: Burmester, GIE 2003
2 Pat.: Mallery, GIE 2004
6 Pat.: Püspök, Am J Gastro 2005
23 Pat.: Kahaleh, GIE 2006
2 Pat.: Yamao, GIE 2006
11 Pat.: Bories, Endoscopy 2007
8 Pat.: Will, Endoscopy 2007
2 Pat.: Ang, JOP 2007

59 patients treated at 8 institutions
# Results

<table>
<thead>
<tr>
<th>Technique (rendezvous)</th>
<th>Success technical</th>
<th>Success clinical</th>
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<tbody>
<tr>
<td>Left hepatic</td>
<td>35 (12)</td>
<td></td>
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<tr>
<td>Transduodenal extrahepatic</td>
<td>24 (6)</td>
<td></td>
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<tr>
<td>Total</td>
<td>59 (18)</td>
<td>91.5%</td>
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< 1% of all ERCPs performed during the same time
Complications

- bile leak 3/59 (5%)
- Infections, cholecystitis – (3x, no intervention)
- perforation – (3x, no intervention)
- pain (2x)
- bleeding (mild 2x)
Questions

• Which route is preferable?
  • ?

• Rendezvous or direct drainage?
  • I prefer direct drainage

• How to dilate the fistula?
  • Bougie, (balloon), fistulotome!

• Which stent to use?
  • Plastic without side holes, covered metal

• How does it compare to PTBD?
  • we don’t know
Conclusion

- **EUS** guided biliary drainage is technically feasible and relatively safe
- Antibiotic prophylaxis is mandatory
- Controlled trials with PTBD are a must
- Limited to highly selected patients
- Limited to centers with extensive experience in ERCP and EUS