Updates – Neues aus dem letzten Jahr

Biliopankreatische Stenosen

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Clinical usefulness of double-guidewire technique for difficult biliary cannulation in ERCP

Ito K et al. Dig Endosc. 2013 Aug 12.

- Single-guidewire technique: success 70% PEP in 8%
- 25 pat. double-guidewire technique: success 72% PEP in 4%
- 13 pat. precut: success in 46% PEP in 0%

Double-guidewire superior, failed PD stent associated with PEP.

Wire-guided biliary cannulation does not reduce the risk of PEP: multicenter randomized controlled trial


- 163 pat. wire-guided cannulation success 83% PEP in 6.1%
- 159 pat. conventional cannulation success 87% PEP in 6.3%

-does not reduce the risk of PEP, does not improve success rate.

Guide wire-assisted cannulation for the prevention of post-ERCP pancreatitis: a systematic review and meta-analysis.


12 RCTs (3450 patients)

-increases the primary cannulation rate and reduces the risk of PEP
Double guidewire technique vs transpancreatic precut sphincterotomy in difficult biliary cannulation. 


34 pat. double-guidewire technique: success 91.2% PEP 38.2%
37 pat. transpancreatic precut: success 91.9% PEP 10.8%

DGT and TPS facilitated cannulation, PEP significantly higher in DGT
New role of the dual knife for precut papillotomy in difficult bile duct cannulation.


18 patients success 100% PEP in 1
A) Papille
Needle knife precut papillotomy and fistulotomy for difficult biliary cannulation during ERCP


48 patients success 96% PEP in 4%

Effective method after failed standard cannulation, not associated with increased risk.
Telemedicine: an important aid to perform high-quality ERCP in low-volume centers.


26 ERCP teleguided overall success rate improved from 85 % to 99 %

Distant guidance improves the quality of care.
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Endosc. sphincterotomy plus balloon dilation versus endoscopic sphincterotomy for choledocholithiasis: A meta-analysis.

3 random. controlled trials: equivalent, but less bleeding
6 retrospective studies: higher initial success, less lithotripsy, fewer complications

Feasible, without increased risk, causing less bleeding.

Large balloon dilation of recurrent bile duct stones prevents short-term recurrence in pat. with previous end. sphincterotomy.

32 patients without LBD; 32 patients with LBD

LBD reduces the short-term recurrence of CBD stones significantly.
A) Papille

Meta-analysis comparison of endosc. papillary balloon dilatation and endosc. sphincteropapillotomy.

980 patients balloon dilatation
995 patients sphincteropapillotomy

Incidence of pancreatitis higher, overall stone clearance rate and risk of bleeding was lower with EPBD compared to EST.

Papillary balloon dilation is not itself a cause of post-ERCP pancreatitis; results of antero- & retrograde papillary balloon dilation.

56 patients antegrade dilatation  success 98.2%  PEP in 0
208 patients retrograde dilation  success 97.1%  PEP 6.7%

Mechanism unclear, associated with procedures before and after balloon dilation.
Fever-based antibiotic therapy for acute cholangitis following successful endoscopic biliary drainage.

Spontaneous passage of common bile duct stones in jaundiced patients.

Ikerus resolved in 76 patients spontaneously
60 patients were free of stones

Management for CBD stone-related mild to moderate acute cholangitis: urgent versus elective ERCP.

urgent ERCP recommended in CBD stone-related mild to moderate acute cholangitis because of short hospital stay
Meta-analysis: rectal indomethacin for the prevention PEP.


4 of 61 retrieved trials between 2007 and 2012 (n = 1470)

Indomethacin significantly reduces the risk of PEP to half in both low- and high-risk patients, and with statistical and clinical significant conclusions.
A) Papille

Meta-analysis: rectal indomethacin for the prevention PEP.
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Pharmacologic prophylaxis of PEP: protease inhibitors and NSAIDs in a meta-analysis.
26 trials, nafamostat mesilate, gabexate mesilate and ulinastatin
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Glyceryl trinitrate for prevention of PEP and improve the rate of cannulation: a meta-analysis of prosp., rand., controlled trials.


12 RCTs involving 2649 patients

GTN reduced the overall incidence of PEP & hyperamylasemia. GTN not helpful for severity of PEP & the rate of cannulation.
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Aggressive Hydration With Lactated Ringer's Solution Reduces PEP.

39% 23 patients

pilot study, aggressive iv hydration appears to reduce the PEP.
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Gernot W. Wolkersdörfer, ENDO-Linz 2014
Role of (18)F-FDG PET/CT in diagnosis and management of pancreatic cancer; comparison with Multidetector CT, MRI & EUS.


52 patients pancreatic ductal adenocarcinoma
14 patients focal mass-forming chronic or autoimmune pancreatitis

FDG PET/CT is valuable, especially when applied along with EUS.

18-Fluorodeoxyglucose positron emission tomography does not aid in diagnosis of pancreatic ductal adenocarcinoma.


218 patients pancreatic ductal adenocarcinoma
14 patients focal mass-forming chronic or autoimmune pancreatitis

FDG-PET not effective in detecting early stage PDA and small metastases, or in differentiating PDA from FMP. Combining with other techniques did not provide any decisive information.
The differentiation of autoimmune pancreatitis and pancreatic cancer using imaging findings.

Shin JU et al. Hepatogastroenterology. 2013 Jul-Aug;60(125):1174-81

CT/MRI: diffuse enlargement, capsule-like rim and delayed homogenous enhancement
ERCP: main duct narrowing by ≥1/3 of length, skipped lesions, the presence of side branches at the narrowed portion, and smooth and straight intrapancreatic common bile duct stenosis
FDG-PET: not significantly different
B) Pankreas

a diffuse enlargement of the pancreas showing delayed enhancement on CT scan.

b hypointense capsule-like rim surrounding the swollen pancreas on T2-weighted MRI.

c diffuse hypoechoic swollen pancreas with hyperechoic spots on US.

d diffuse irregular narrowing of the main pancreatic duct.

e stenosis of the lower BD and segmental narrowing of the main PD. Upstream dilatation of the pancreatic duct is less noted than with pancreatic cancer.

f after steroid therapy

Autoimmune pancreatitis: proposal of IgG4-related sclerosing disease.
T. Kamisawa and A. Okamoto
B) Pankreas

EUS elastography for differentiating between pancreatic adeno-carcinoma and inflammatory masses: a meta-analysis.
Li X et al. World J Gastroenterol. 2013 Oct 7;19(37):6284-91
EUS elastography is a valuable method for the differential diagnosis between PDAC and PIM.

Clinical utility of endoscopic ultrasound elastography for identification of malignant pancreatic masses: a meta-analysis.
Ying L et al. J Gastroenterol Hepatol. 2013 Sep;28(9):1434-43
10 studies including 893 pancreatic masses (646 malignant, 72.3%)
good identification tool for benign and malignant pancreatic masses, with its good performance for exclusion of presence of malignant pancreatic masses.
Differential Diagnosis of Focal Non-Cystic Pancreatic Lesions With and Without Proximal Dilation of Pancreatic Duct on CT Scan.


445 non-jaundiced patients

- neoplasm in 152 of 187 patients with PD dilation
- 87 of 258 patients without PD dilation

Dilation PD proximal to a focal solid pancreatic lesion increases the likelihood of malignancy.
Role of endoscopic ultrasonography in patients with first episode of idiopathic acute pancreatitis.


51 patients

56.9 % patients with EUS findings: calculus, sludge and chronic pancreatitis

EUS is safe and has a reasonable diagnostic yield.
B) Pankreas

CEA in differentiating pancreatic cysts: a meta-analysis.


8 studies (504 patients) 109.9 to 6000 ng/mL
pooled sensitivity of 63%, pooled specificity of 63%

Accuracy in differentiating "between benign and malignant" poor.
International Consensus Diagnostic Criteria for Autoimmune Pancreatitis and Its Japanese Amendment Have Improved Diagnostic Ability over Existing Criteria


ICDC achieved the highest diagnostic ability in terms of accuracy (95.0%), followed by JPS 2011 (92.9%), Korean (92.2%), HISORt (88.7%), Asian (87.2%), and JPS 2006 (85.1%).
### Table 1: Comparison of 6 major diagnostic criteria systems for AIP

<table>
<thead>
<tr>
<th></th>
<th>JPS-2006</th>
<th>Korean</th>
<th>Asian</th>
<th>HISORt</th>
<th>ICD-O</th>
<th>JPS-2011</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(I) Imaging findings</strong></td>
<td>Mandatory</td>
<td>Mandatory</td>
<td>Mandatory</td>
<td>Not mandatory</td>
<td>Not mandatory</td>
<td>Not mandatory</td>
</tr>
<tr>
<td>(a) Parenchymal imaging</td>
<td>Swelling</td>
<td>Swelling</td>
<td>Swelling</td>
<td>Swelling</td>
<td>Focal mass/calciﬁcation/atrophy, etc.</td>
<td>Diffuse swelling</td>
</tr>
<tr>
<td>(b) Ductal imaging</td>
<td>ERCP irreg. narrowing</td>
<td>ERCP/MRCP irreg. narrowing</td>
<td>ERCP irreg. narrowing</td>
<td>Irregular narrowing</td>
<td>Focal duct stricture</td>
<td>Irregular narrowing</td>
</tr>
<tr>
<td>(III) Histology</td>
<td>LPSP</td>
<td>LPSP/IgG4-positive plasma cells</td>
<td>LPSP/IgG4-positive plasma cells</td>
<td>Includes histological findings</td>
<td>LPSP/IgG4-positive plasma cells</td>
<td>LPSP/IgG4-positive plasma cells</td>
</tr>
<tr>
<td>(IV) Other organ involvement</td>
<td>Not included</td>
<td>Includes histological findings</td>
<td>Not included</td>
<td>Includes histological findings</td>
<td>Includes histological findings/clinical findings</td>
<td>Includes histological findings/clinical findings</td>
</tr>
<tr>
<td>(V) Response to steroid</td>
<td>Not included</td>
<td>Includes pancreatic lesion/extra-pancreatic lesions</td>
<td>Optional pancreatic lesion</td>
<td>Includes pancreatic lesion/extra-pancreatic lesions</td>
<td>Includes pancreatic lesion/extra-pancreatic lesions</td>
<td>Includes pancreatic lesion/extra-pancreatic lesions</td>
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</table>

**Diagnosis**

<table>
<thead>
<tr>
<th></th>
<th>I + II</th>
<th>I + II</th>
<th>I + III</th>
<th>I + IV</th>
<th>I + V</th>
</tr>
</thead>
<tbody>
<tr>
<td>JPS-2006</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Korean</td>
<td></td>
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<td></td>
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<tr>
<td>Asian</td>
<td></td>
<td></td>
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</tbody>
</table>

**Note:**
- JPS-2011 requires evaluation by ECP in indeterminate imaging evidence.
- Diagnosis of type 2 AIP requires histologically conﬁrmed IDCP/GEM.
- Findings in type 1 AIP are sclerosing cholangitis, retroperitoneal ﬁbrosis, Ménétrier disease, and renal disease. Finding in type 2 AIP is inﬂammatory bowel disease.

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Gernot W. Wolkersdörfer, ENDO-Linz 2014
Endoscopic stent therapy in patients with chronic pancreatitis: a 5-year follow-up study.


19 patients

initial success 17

no relapse in 57%

Endoscopic therapy should be the treatment of choice in patients being inoperable or refusing surgical treatment.
Endoscopic plastic stenting for bile duct stones: stent changing on demand or every 3 months. A prospective comparison study.


<table>
<thead>
<tr>
<th>Patients</th>
<th>Stent Exchange</th>
<th>Cholangitis</th>
</tr>
</thead>
<tbody>
<tr>
<td>39</td>
<td>every 3 mo</td>
<td>1</td>
</tr>
<tr>
<td>39</td>
<td>on demand</td>
<td>14</td>
</tr>
</tbody>
</table>

Best to avoid cholangitis was exchange at defined intervals.

Short-term biliary stenting before mechanical lithotripsy for difficult bile duct stones.


<table>
<thead>
<tr>
<th>Patients</th>
<th>Procedure</th>
<th>Time, Success</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>mechanical lithotripsy</td>
<td>p &lt; 0.001</td>
</tr>
<tr>
<td>39</td>
<td>stenting then mechanical lithotripsy</td>
<td></td>
</tr>
</tbody>
</table>

Short-term (2 to 3 months) stenting should be done.
Feasibility of using wire-guided needle-knife electrocautery for refractory biliary and pancreatic strictures.

Gao DJ et al. J Gastrointest Endosc. 2013 May;77(5):752-8

279 patients  success rate increased from 95.7% to 98.9%
279 ERCP/dilators  22 Soehendra retriever  10 needle knife  1 PTCD (+2)

appears to be effective.
Inzidenz 3-4 / 100.000 x Jahr
medianes Alter 70-75 Jahre

Progression $\Rightarrow$ Cholestase, Sepsis

Palliative Therapien $\Rightarrow$ ÜLZ
Effizienz gegen Tumorkomplikationen
C) Gallenwege
C) Gallenwege

Gernot W. Wolkersdörfer, ENDO-Linz 2014
C) Gallenwege

Photodynamische Therapie - Nebenwirkungen

Porfimer

Temoporfin
<table>
<thead>
<tr>
<th>Komplikationen</th>
<th>Todesursachen</th>
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</thead>
<tbody>
<tr>
<td>Chronische Cholangitis</td>
<td>Tu-Progression</td>
</tr>
<tr>
<td>Sepsis / Peritonitis</td>
<td>Infektionen</td>
</tr>
<tr>
<td>Gastrointestinale Blutung</td>
<td>GI-Blutungen</td>
</tr>
<tr>
<td>Sonnenbrand I / II</td>
<td>Embolie/Herztod</td>
</tr>
</tbody>
</table>

Berr F, Sem Liv Dis 2004
I. Ernst
Klinik und Poliklinik für Strahlentherapie – Radioonkologie
Universitätsklinikum Münster
C) Gallenwege

<table>
<thead>
<tr>
<th>Therapieform</th>
<th>n</th>
<th>Mediane ÜLZ (Mo)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemotherapie</td>
<td></td>
<td>Kontr. Therap.</td>
</tr>
<tr>
<td>nichtresektabel, metastasiert, extrahepatisch hilär, ampulär oder Gallen-blasenkarzinome, intrahepatisch</td>
<td>815</td>
<td>8,60</td>
</tr>
<tr>
<td>Radiotherapie</td>
<td></td>
<td></td>
</tr>
<tr>
<td>nichtresektabel, extrahepatisch hilär</td>
<td>85</td>
<td>9,9</td>
</tr>
<tr>
<td>Photodynam. Therapie</td>
<td></td>
<td></td>
</tr>
<tr>
<td>nichtresektabel, extrahepatisch hilär</td>
<td>303</td>
<td>6</td>
</tr>
<tr>
<td>Operation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>nicht-kurativ resektable</td>
<td>83</td>
<td>4,5</td>
</tr>
</tbody>
</table>
R0 but not R1/R2 resection is associated with better survival than palliative photodynamic therapy in biliary tract cancer.


321 patients  28% surg.intervention /curative int.  19 mo (0-83)  
38% R0 resections.  8 mo (1–49)  
34% chemo- and/or radiotherapy,  12 (1–51)  
14% PDT  
37% biliary drainage  3 (0–60)
Safety and long term efficacy of temoporfin PDT in locally advanced biliary tract carcinoma: a multicenter prospective phase II study

Andrej Wagner¹, Ulrike W. Denzer⁴,⁵, Daniel Neureiter², Tobias Kiesslich¹,⁸, Frieder Berr¹*, Andreas Puspoeck³, Klaus Emmanuel⁶,⁷, Ansgar W. Lohse⁵, Uli Beuers⁹, Nora Degenhardt⁵, Gernot W. Wolkersdörfer¹Erik A.J. Rauws⁹
Danke für Ihre Aufmerksamkeit!