

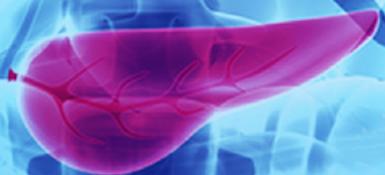
2019 CAPER

Collaborative Alliance for
Pancreatic Education and
Research

PANCREAS ACADEMY

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Endoscopic Therapy for Acute & Chronic Pancreatitis

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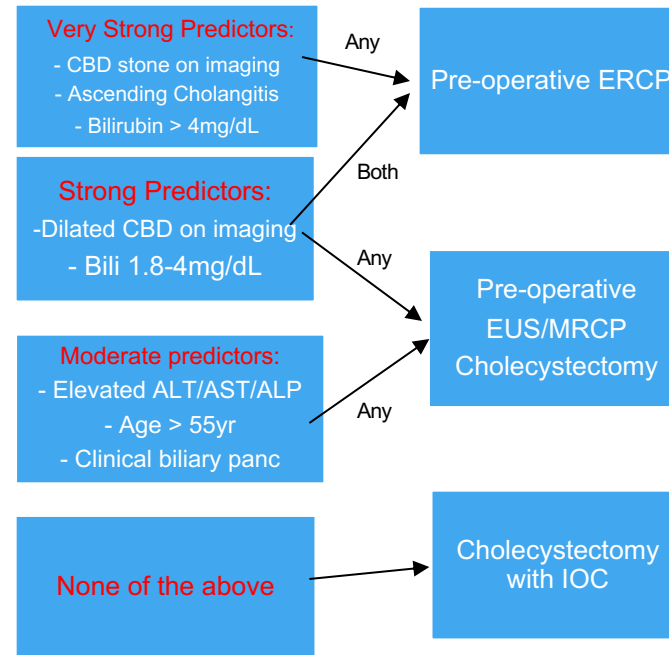


When to treat AP

- Biliary Pancreatitis
- Smoldering AP
- Pseudocysts
- Walled-off Pancreatic Necrosis
- Severe AP-PD stents
- RAP and divisum

Acute Biliary Pancreatitis

- Four RCTs shown outcomes' improvement for early ERCP in Severe biliary AP
- Subset analysis suggested main benefit in pts with CBD stones and/or cholangitis
- Modern algorithms incorporate EUS/MRCP to clear CBD

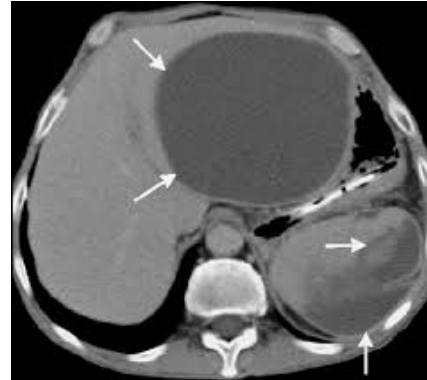


PD stents for Smoldering AP

- Failure to improve with conservative therapy
- Documented ongoing pancreatic enzyme elevation and radiologic inflammation
- Uncontrolled small series of response to PD stenting

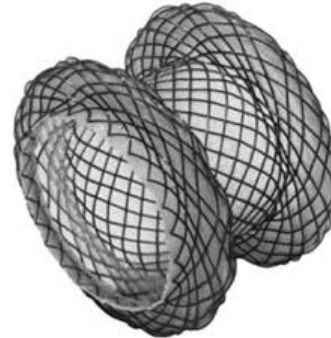
Pseudocysts

- Mature fluid collections > 6 weeks after AP onset
- No necrosis (solid debris)
- Cyst-gastrostomy or cyst-duodenostomy with one or more plastic double pigtail stents
- With or without EUS-guidance



Walled off Pancreatic Necrosis

- Sterile (symptomatic) or Infected
- Delay as long as possible
- Plastic stents insufficient
- cSEMS
- LAMS
- Endoscopic debridement, H_2O_2 irrigation

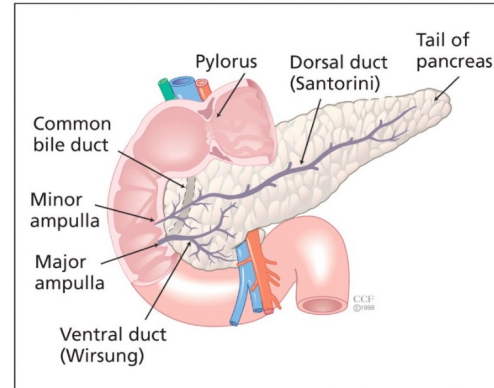
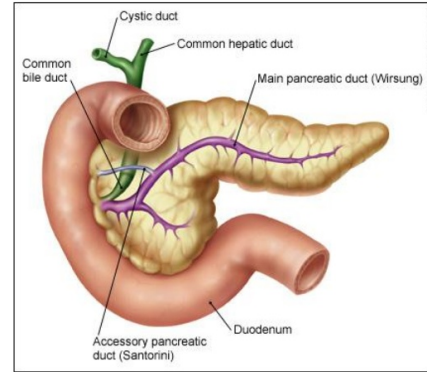


PD stents early in Severe AP

- Initially reported by Kozarek's group
- Done in conjunction with IR & GI surgery
- Early percutaneous drains
- Excellent outcomes
- Single center, small series

RAP in Pancreas Divisum

- Pancreas Divisum seen in 8% population
- Enriched in idiopathic RAP
- Higher incidence of genetic alterations
- Minor ES may be helpful in subset
- SHARP: ongoing, multicenter RCT (U01 NIDDK-funded)



Endotherapy in CP

What we can do



- Retrospective series
- Case reports
- Expert opinion

What we should do



- Prospective studies
- RCTs
- Meta-analyses

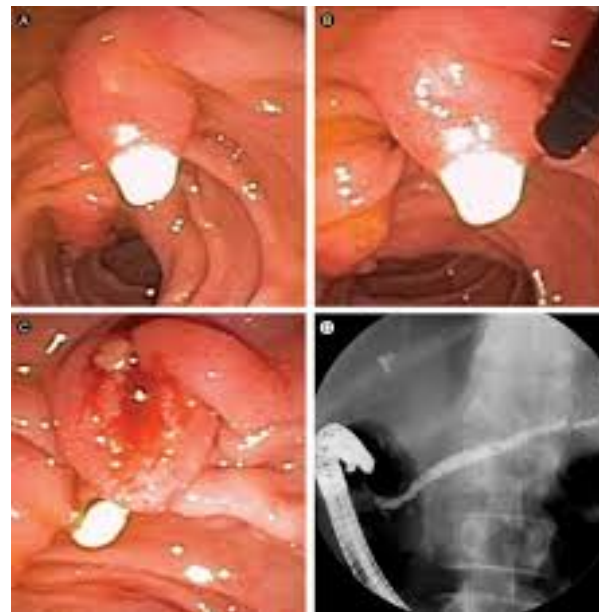
Endotherapy in CP

What we can do

- Pseudocysts: endoscopic cyst-enterostomy
- PD Stones: sphincterotomy/stents/extraction/ESWL
- PD Strictures: Balloon dilation and stents
- PD Fistulae: PD stents
- CBD strictures: cSEMS

Endotherapy: Stones

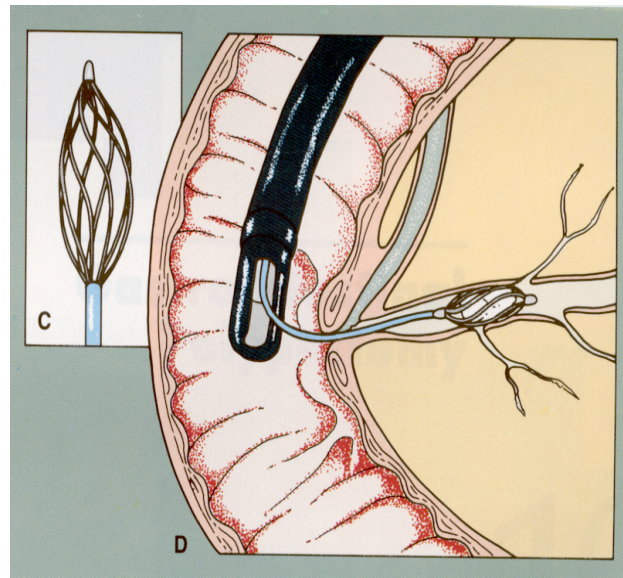
- Calcified majority of PD stones in CP
- Stones may be in the main duct or side branches
- May be upstream from strictures
- Etiology is uncertain, stasis + PSP
- Size (>12mm) and location (tail) predict poor endoscopic response



Farnbarcher, et al. GIE 2002.

Endotherapy: Stones

- Trial of PD stenting
- Start with pancreatic sphincterotomy: conventional technique, 2 o'clock direction, consider more cutting current
- Balloon dilate any downstream PD strictures
- No pancreas specific stone extraction devices: use baskets, lithotripters, and balloons depending on duct diameter
- Leave a PD stent
- Multiple procedures



Endotherapy: Stones

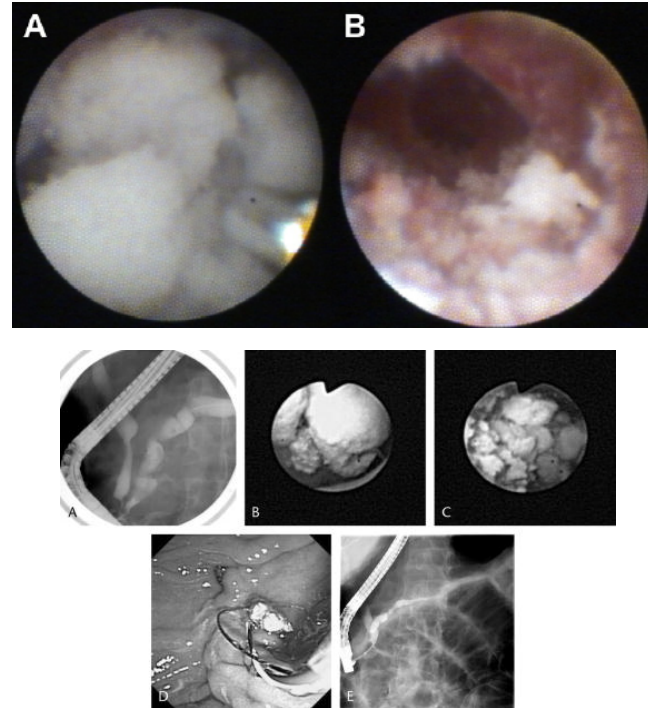
- Multiple reported series
- *ESWL* frequently required as adjunct
- Machines using fluoroscopic targeting are mandatory; requires GA
- 2,000-3,000 shocks gated to EKG
- 80% effective, usually require ≥ 2 sessions
- Pain is common; complications in 20% (pancreatitis, hematuria, and sepsis)



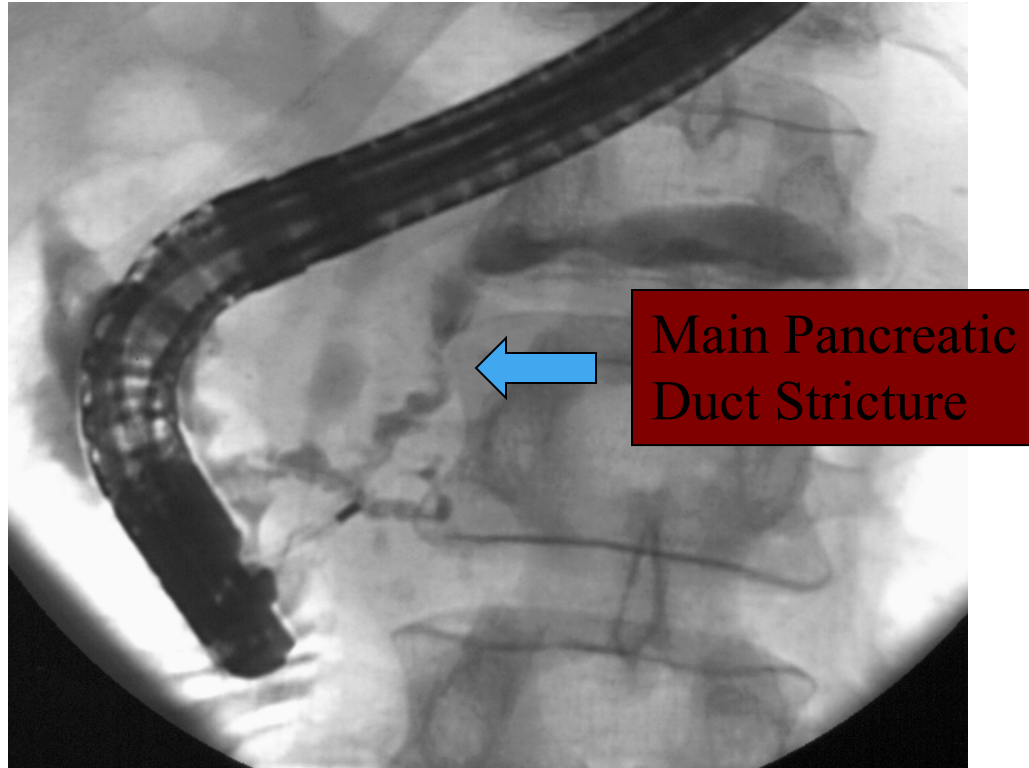
Kozarek R, et al. GIE 2002.

Electro-Hydraulic Lithotripsy

- Direct visualization
- Cholangioscope vs. catheter
- Start with lower power
- Parameters not validated
- Safety profile not known
- Off-label, case series



Endotherapy: PD Strictures



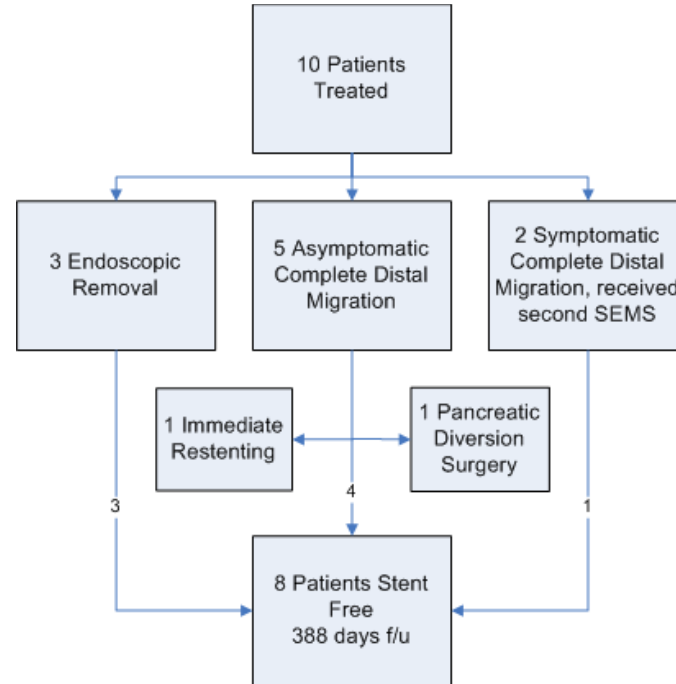
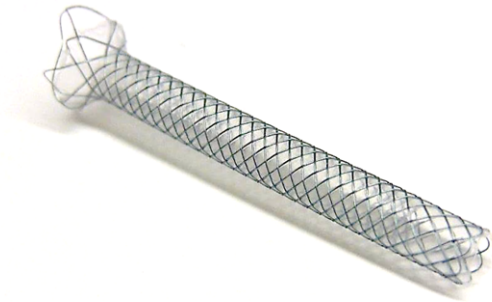
Endotherapy: PD Strictures

- Cross stricture (0.018" guidewires)
- Dilate: TTS balloon, push catheters, metal screw dilators
- Place PD stents
- Multiple stents may be used
- Interval changes q 2-3 months
- 1-year duration



Pancreatic Strictures: Future

- Pancreatic FC SEMS in Painful Chronic Pancreatitis



Endoscopic Management: What should we do

- Patients who underwent ET had more symptoms & more complex disease than those managed medically
- Technical success of ET: 85%
- Clinical success of ET: 51% with mean f/u 4.8 yrs
- Responders to ET: older, shorter duration of disease, less constant pain, & lower daily narcotic use compared to non-responders
- Medical management: 31% improved; 21% went on to surgery with mean f/u 5.7 yrs

ET vs. Surgery: what should we do

- RCT of 39 highly selected pts with CP & dilated PD followed for 24 mo
- Randomized to endotherapy (n=19; 16 ESWL) vs. lateral pancreaticojejunostomy (n=20)
- Izbicki pain scores 25 surg vs. 51 endo ($p<.001$)
- SF36 surg < SF36 endo ($p=.003$)
- Complete or partial pain relief at 24 mo: 75% surg vs. 32% endo ($p=0.007$)
- No difference in complications, LOS, & changes in panc fx
- Endo procedures mean=8; Surg mean=3 ($p<.001$)

Endoscopic Management of CP: Conclusions

- Endotherapy helpful in managing pain in CP
- Endoscopic stenting may predict response to surgical drainage
- ESWL and/or EHL should be available when treating PD stones (expert centers)
- Consider surgery for chronic symptoms of long duration, large stones, and/or stones in the body/tail
- Be mindful of both EndoRx and drainage or resective surgery in patients who might benefit from TP-IAT

