A Complicated Ascitis

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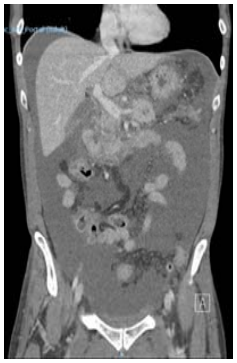
Case presentation

- A 47 years-old men was admitted (03/12/2014) for abdominal pain since more than 2 weeks (prior this hospitalization)
- Pain is no more sensitive to 5 mg oxycodone
- Previous history:
  - Pancreatitis complicated of three PK (08/2012)
  - Alcoholism (7-10 U/d since 1997)
  - Smoker 30 P/Y
  - Depression
  - Sinus tachycardia

Case presentation

- Medications
  - Bisoprolol 10 mg; paroxetine 30mg; oxynorm 5 mg
- Physical examination
  - BP 134/59 mmHg; HR 72/min
  - Abdomen tense and sensitive diffusely
- Lab tests
  - Leuco 20,440/mm3; Htc 35,86%; Platelet 906000/mm3
  - GGT 69 UI/L; Lipase 1603 UI/L; CRP 154 g/L

Case presentation



- Acute on chronic pancreatitis
- Hypodensity of the head of the pancreas (necrosis?)
- Ascitis
- Non occlusive thrombus in portal vein

Question 1

- What should be your next diagnostic test?

1. Fibrotest
2. Fibroscan
3. Both of them (1+2)
4. Paracenthesis

Case presentation

- Ascitis fluid analysis:
  - 0 blood cells
  - 1200 nucleated cells (66% macrophages)
  - Protein: 2477mg/dl
  - Lipase>12000U/L
- Diagnosis:
  - PANCREATIC ASCITIS

Pancreatic ascitis

- Rare condition of « massive accumulation of pancreatic fluid into the peritoneal cavity »
  - Mainly associated with CP
    - 4% of alcoholic CP
    - 6-14 % of alcoholic CP with Pseudocysts
  - Traumatic rupture of the pancreas
  - No history of AP in 66% of the cases
- Diagnosis:
  - Lipase level usually > 1000U/L
  - Lipase at least 3 times the plasmatic level
  - Ascitis to serum ratio of lipase > or = to 6

Uchiyama et al Hepatogastro 1989;36:244. Runyon J Clin Gastroenterol 1987; 9:172. Bracher et al GIE 1999;49:710. Cameron etal Ann Surg 1976;184:587

Question 2

- What should be your first therapeutic approach?

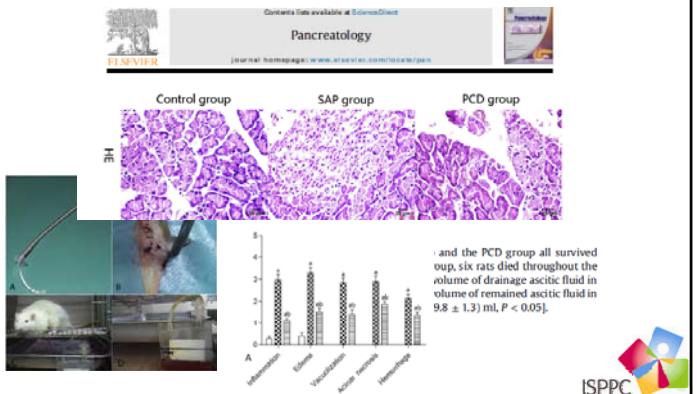
1. Surgery
2. Endoscopy
3. Repeated paracentheses, nihil per os, NPT & octreotide
4. Wait & see

Pancreatic ascitis

- ***Conservative management*** should be attempted in all patients, including
  - Nihil per os
  - TPN
  - Octreotide or somatostatine
  - Diuretics
  - Repeated paracenthesis
- Healing is obtained in 30- 50% of the patients

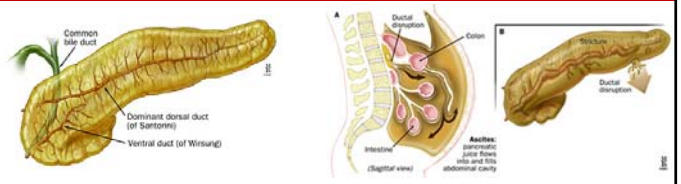
Cameron et al Ann Surg 1976;184:587. Variya & al Am J Gastro 1983;78:178. Stone Br J Hosp Med 1986;35:252. Oktedalen & al Gastroenterology 1990;99:1520. Uhl & al Digestion 1999;60:23

Pancreatic ascitis



Guang Yu Chen & al Pancreatology 2015;15:71-77

Pancreatic Duct Leaks and Disruptions



- Internal pancreatic fistula
  - Pseudocyst (&/or)
  - Ascites & / or
  - Pleural effusion
- External pancreatic leak

Varadarajulu & al Gastrointestinal Endoscopy Clin N Am 2013; 23: 863-92

Case presentation

- Despite conservative management, patient condition didn't improve
- Major complaint was abdominal pain
- Pain killer policy was the following (managed with anesthesiologists):
  - 40 mg Morphine IV daily
  - 120mg Morphine SC daily
  - 4 gr paracetamol IV daily
  - 4X1 gr metimazole daily
  - Even ketamine ….

Question 3

- What should be your next examination?

1. MRCP
2. ERCP

Pancreatic Duct Leaks and Disruptions Management

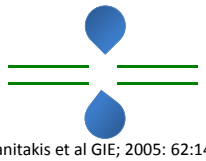
- PD L&D management is based on case series and case reports, but managemetn principles includes:
  - Patient stabilization
  - Pancreatic duct anatomy definition
  - Localization & caracterization of the leak
  - Optimize hydration, nutrition and electrolytes balance

Varadarajulu & al Gastrointestinal Endoscopy Clin N Am 2013; 23: 863-92

Pancreatic Duct Leaks and Disruptions Management

- Partial disruption

- Complete disruption



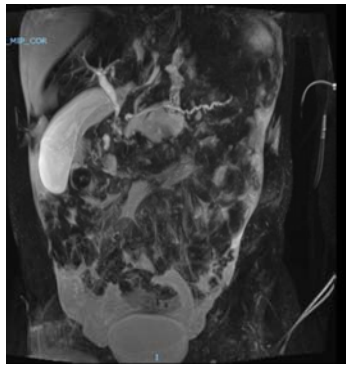
- **Endoscopic management**
  - Transmural drainage
    - Pseudocyst & Walled of Pancreatic fluid collection
  - Transpapillary drainage
    - Ascitis, pleural effusion & external fistula
  - Pancreatico- gastro or duodeno-stomy
    - Disconnetected duct tail syndrome

Arvanitakis et al GIE; 2005: 62:143. Carr-Locke et al Dig Dis Sci 1981, 26: 7
Varadarajulu et al GIE 2013

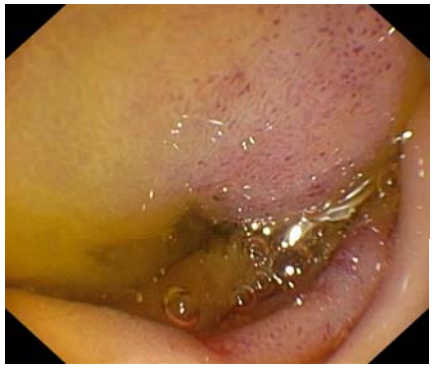
Pancreatic Duct Leaks and Disruptions Management

- MRCP
  - Non invasive, diagnostic
  - Delineate pancreatic duct morphology
  - Detect pancreatic disruption (91-100% of the cases)
  - Potential benefit of the use of secretin
  - Visualization of the proximal part of the disruption
- ERP (Endoscopic Retrograde Pancreatography)
  - Most sensitive
  - Differentiate partial and complete disruptions
  - Provide treatment (Naso Pancreatic Drainage)
  - Invasive (in case of necrosis: infection secondary to injection)
  - Operator depedent (10% of failure)

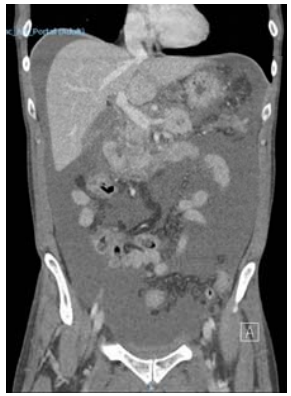
Case presentation



Case presentation/ ERP DAY +1



Case presentation



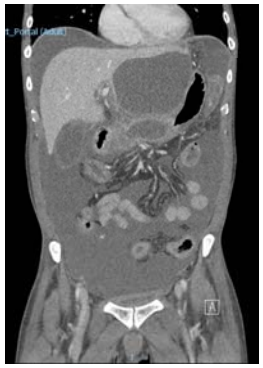
- Acute on chronic pancreatitis
- Hypodensity of the head of the pancreas (necrosis?)
- Ascitis
- Non occlusive thrombus in portal vein

Question 4

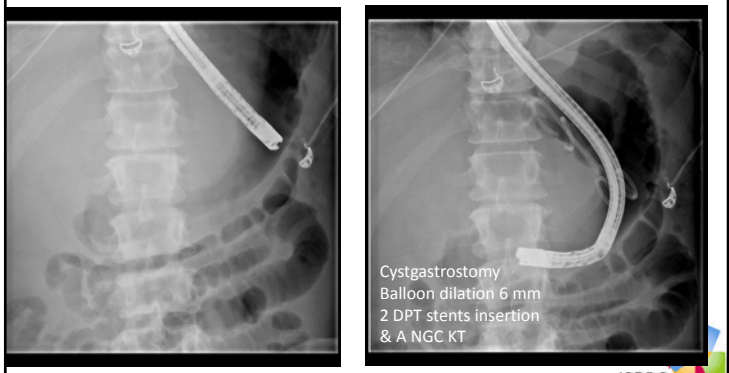
- What should be your therapeutic approach?
- There are no pseudocyst; second duodenum edema and/or ischemia

1. Surgery
2. Endoscopy
3. Repeated paracentheses, nihil per os, NPT & octreotide

Case presentation: CT 7 Day + 7



Case presentation CYSTGASTROSTOMY



Case presentation

- Three days after the cyst gastrostomy:
- Hematemesis, drop in hemoglobin (5,7gr/dl)
- EGD was performed:
  - Old blood and clots in the pigtail stents

Question 5

- What should be your attitude?

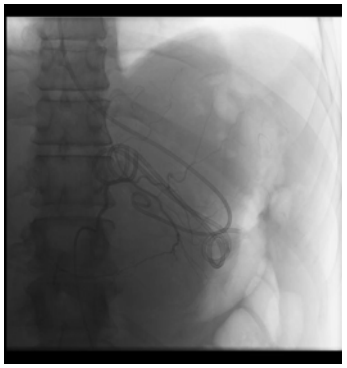
1. Stop LMWH (partial portal thrombosis)
2. Angiography +1
3. Endoscopic treatment +1
4. Send the patient to surgery +1

Pseudoaneurism in pancreatitis

- Occur in 10% of the walled-off pancreatic fluid collection
- Should be evoked in case of one of the three clinical events complicating a pancreatitis:
  - Unexplained GI bleeding
  - Sudden expansion of fluid collection
  - An unexplained drop in hematocrit

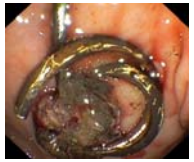
El Hamel & al Br J Surg 1991;78:1059. Pitkäranta & al 1991;26:58
Marshall & al Arch Surg 1996;131:278.

Case presentation



Question 6

- What should be your attitude?



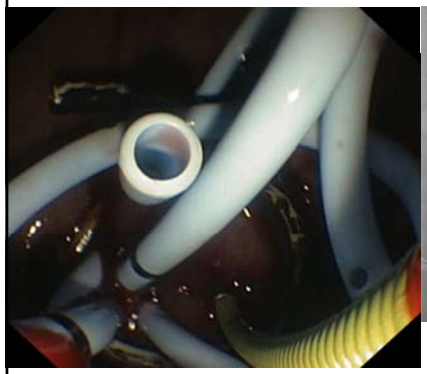
1. Gold probe
2. Clips
3. Additional plastic stenting
4. Consider a fully covered self expanding stent

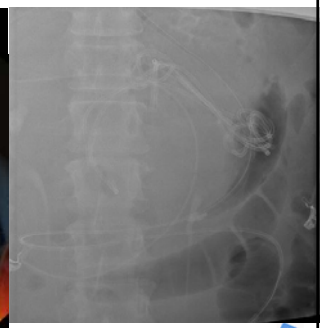
Cyst gastrostomy bleeding

- Theoritically prevented when performed under EUS guidance
- Early (immediate) bleeding
  - Exclude pseudoaneurism (R/ embolization)
  - Inadvertent vascular puncture (R/ endoscopy)
- Late bleeding
  - Bleeding at the level of gastrostomy
  - Treatment:
    - epinephrine injection 1/10 000
    - Coagulation or clip
    - Tamponade (with additional stenting)

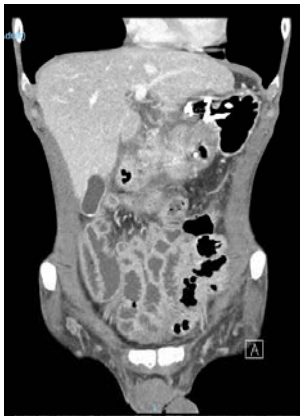
Gambiez & al Arch Surg 1997;132:1016

Case presentation





Case presentation



- After 7 weeks, the patient was discharged
- Portal vein was permeable
- Still taking tramadol for pain

Endoscopic Management of Pancreatic Ascitis

Authors	N	Success rate	Time to resolution	Comments
Kozarek et al	4 (stent)	100%	6-8 weeks	paracenthesis
Bracher et al	8 (stent)	88% (7/8)	6 weeks	
Telford et al	7 (stent)	86% (6/7)	6 weeks	
Bhasin et al	6 (NPKT)	100%	4 weeks	Bridging rupture
Pai et al	28 (stent)	92,9% (26/28)	5 (3-8) weeks	
Kurumboor	11 (stent)	55% (5/9)	6 weeks	3 infections

Case presentation

- 3 months later transient increased pain has motivated an EGD
- Traumatic duodenal ulcer was diagnosed

Question 6

- Do you consider to remove the DPT stents once PFC resolution is obtained?

1. NO
2. YES

Pancreatic-fluid collections: a randomized controlled trial regarding stent removal after endoscopic transmural drainage CME

Marianna Arvanitakis, MD, Myriam Delhaye, MD, PhD, Maria Antonietta Bali, MD, Celso Matos, MD, Viviane De Maertelaer, PhD, Olivier Le Moine, MD, PhD, Jacques Devière, MD, PhD

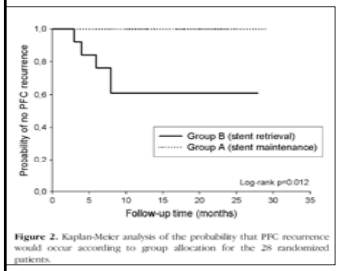


Figure 2. Kaplan-Meier analysis of the probability that PFC recurrence would occur according to group allocation for the 28 randomized patients.

28 patients

Randomization:
- stents left in place
- stents removed if collection resolution

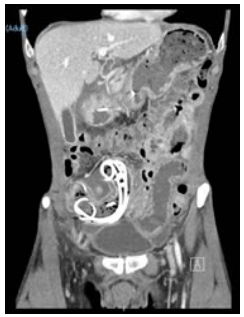
Median FU 14 months

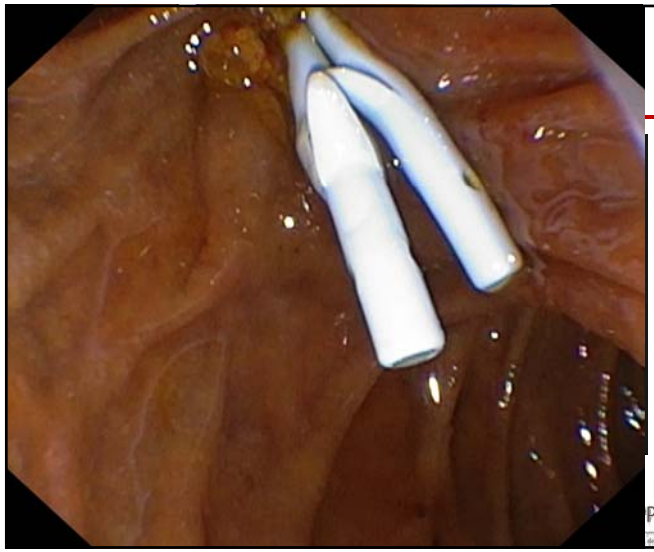
Recurrence in 5 vs. 0 cases (p =.013)

Arvanitaki. Gastrointestinal Endoscopy 2007;65:609

Case presentation

- 3 months later transient increased pain has motivated an EGD
- Traumatic duodenal ulcer was diagnosed
- Two weeks later the EGD, the patient was admitted for an intestinal occlusion





CONCLUSIONS

- Pancreatic ascitis is a rare condition
- CECT & MRCP are important workup before initiating therapy
  - Excluding pseudoaneurism
  - Evaluating potential pseudocyst and/or pleural effusion
  - Pancreatic ducts anatomy delineation

CONCLUSIONS

- Conservative therapy should be initiated in any patient:
  - TPN/nihil per mouth
  - Hydration/electrolytes balance
  - Somatostatine/octreotide
  - Paracenthesis/diuretics
- ERP is the first line therapy, favouring the transpapillary drainage
- Success rate seems to depend of the ability to bridge the rupture