Choledocholithiasis (CBD stones)

Management of CBD stones

Pre-op Diagnosis

- ERCP first
- Lap chole with intraoperative exploration
- Lap chole then post-op ERCP

Intra-op Diagnosis

- Duct flushing for tiny stones
- Transcystic CBD exploration
- Choledochotomy
- Intra-op ERCP (difficult logistically)
- Post-op ERCP

Post-op Diagnosis

- Expectant management for solitary +/- small stones
- ERCP
  - If ERCP fails, options are PTC or reoperation

Cholangitis

- Bacterial infection of biliary tree
- Almost always due to degree of biliary of obstruction, due to stones or stricture
- Biliary pain with jaundice and high fevers +/- rigors +/- positive blood cultures
- Confirm biliary dilatation with USS +/- MRCP
- Urgent ERCP +/- stenting
- Followed by plan for definitive management of gallstones
- Index admission or early elective cholecystectomy

Pancreatitis

Epidemiology in NZ

- National Data 2006-2015
- Incidence 58 per 100,000 per year
    - Maori 95 per 100,000
    - NZ Europeans 60 per 100,000
    - Pacific peoples 54 per 100,000
    - Asian 35 per 100,000
- Auckland/Northland region have highest incidence 135 per 100,000 per year

Pancreatitis

- Most due to small gallstones passing through CBD
- Low index of suspicion for anyone with upper abdo or lower chest pain
- Elderly patients may present with less typical symptoms eg. vomiting, abdo distension, confusion
- Most patients settle quickly with supportive management - IV fluids, analgesia, +/- “gut rest”
- Look for gallstones - if found - index admission cholecystectomy
- ERCP rarely needed - occasionally if there is coexisting cholangitis or significant biliary obstruction

Pancreatitis

Severity definition - revised Atlanta critera 2012

- Mild
  - no organ failure or complications
- Moderate
  - transient organ failure, or local or systemic complications
- Severe
  - persistent organ failure (>48hrs)

Pancreatitis

Severe pancreatitis

- Occur in 10% patients
  - may need ICU support
  - often long hospital stay with multiple secondary complications
  - increased mortality

Pancreatitis

Moderate pancreatitis

- Common complications
  - Fluid collections - most settle without intervention
  - Necrosis (sterile) - most settle without intervention, but associated with more stormy and prolonged course of recovery
  - Infected collections or necrosis - may need drainage/debridement
  - Late collections (pseudocysts and walled-off necrosis) - some require drainage
  - GI dysfunction - treat with enteral feeding or TPN
  - Gastric outlet obstruction - usually temporary due to oedema

Pancreatitis

Moderate pancreatitis

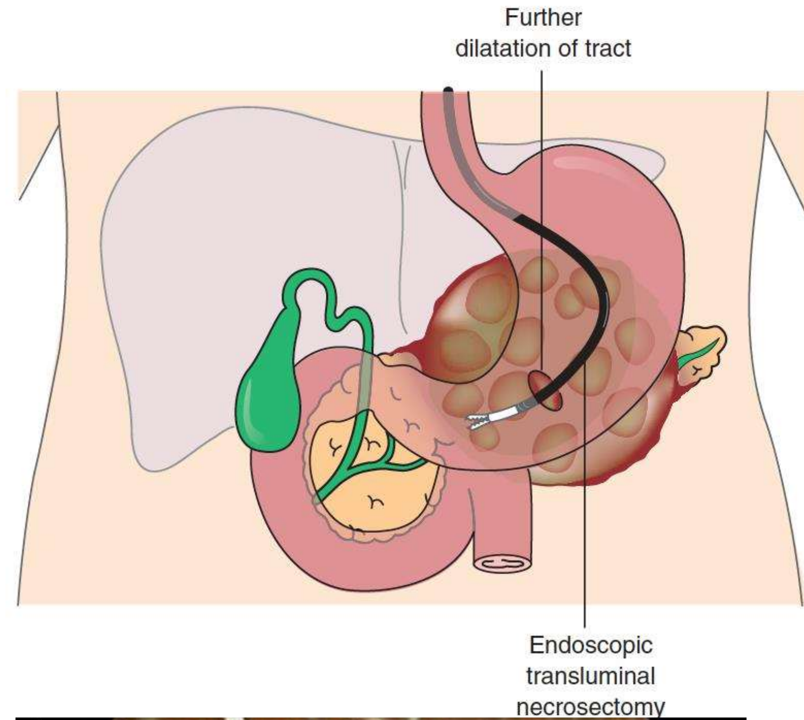
- Uncommon complications
  - Bleeding
  - Abdominal compartment syndrome - may need laparostomy decompression
  - Visceral ischaemia
  - Splenic vein or portal vein thrombosis

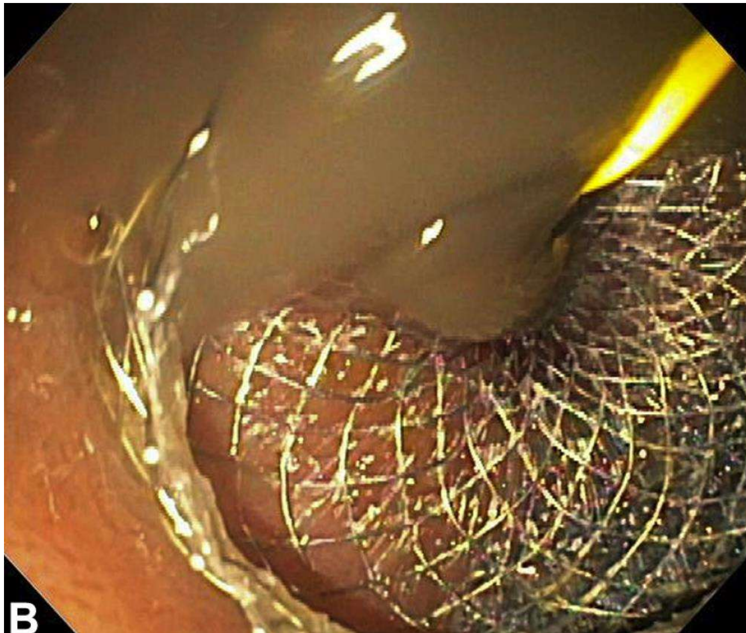
Pancreatitis

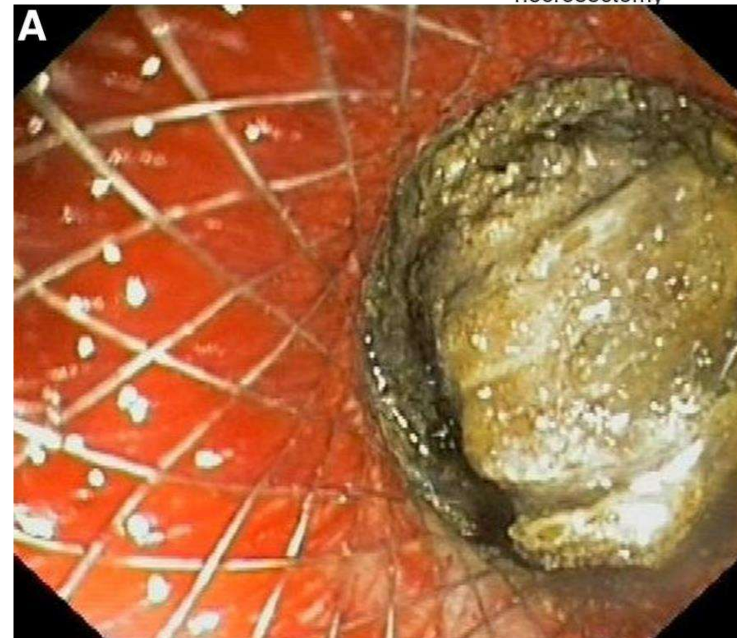
Infected necrosis

- Solid necrotic pancreas with infected fluid
- Mortality ranges from 5% (without organ failure) to 30% (with organ failure)
- Treatment
  - Open necrosectomy - difficult surgery with high morbidity and mortality, now rarely done as last resort
  - Retroperitoneal drainage +/- laparoscopic necrosectomy ("Step-up" approach) - technically challenging
  - EUS AXIOS drainage +/- necrosectomy - preferred modern approach if expertise available
  - Retroperitoneal drainage + endoscopic necrosectomy - novel variation based on EUS necrosectomy technique

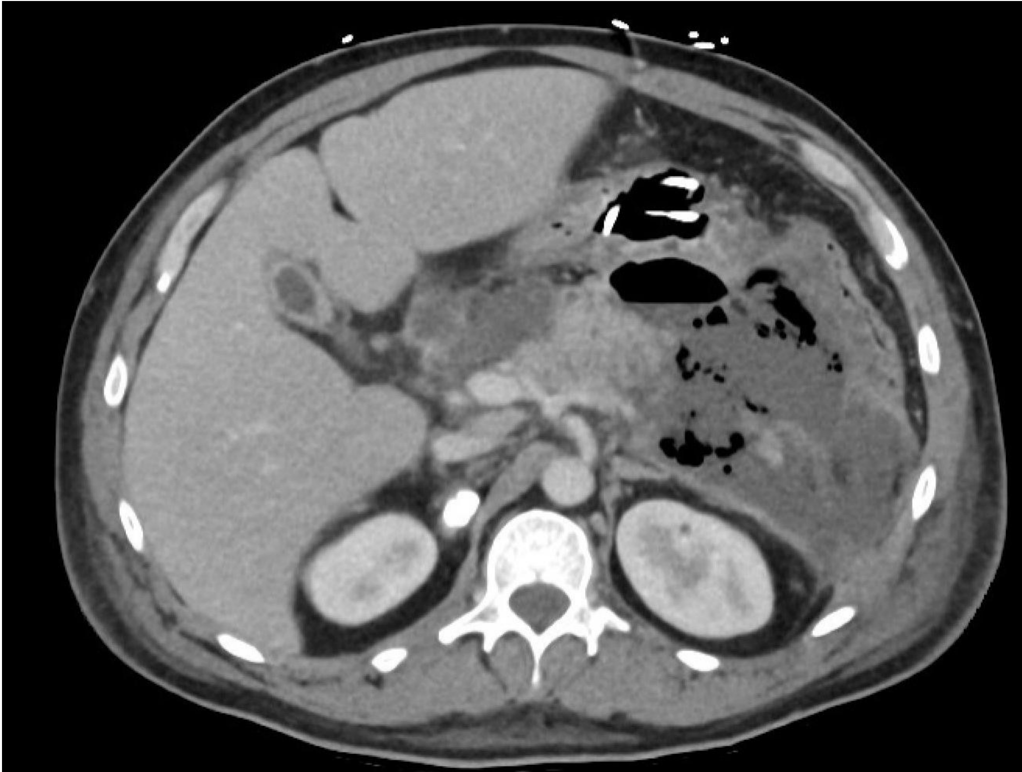
EUS AXIOS technique

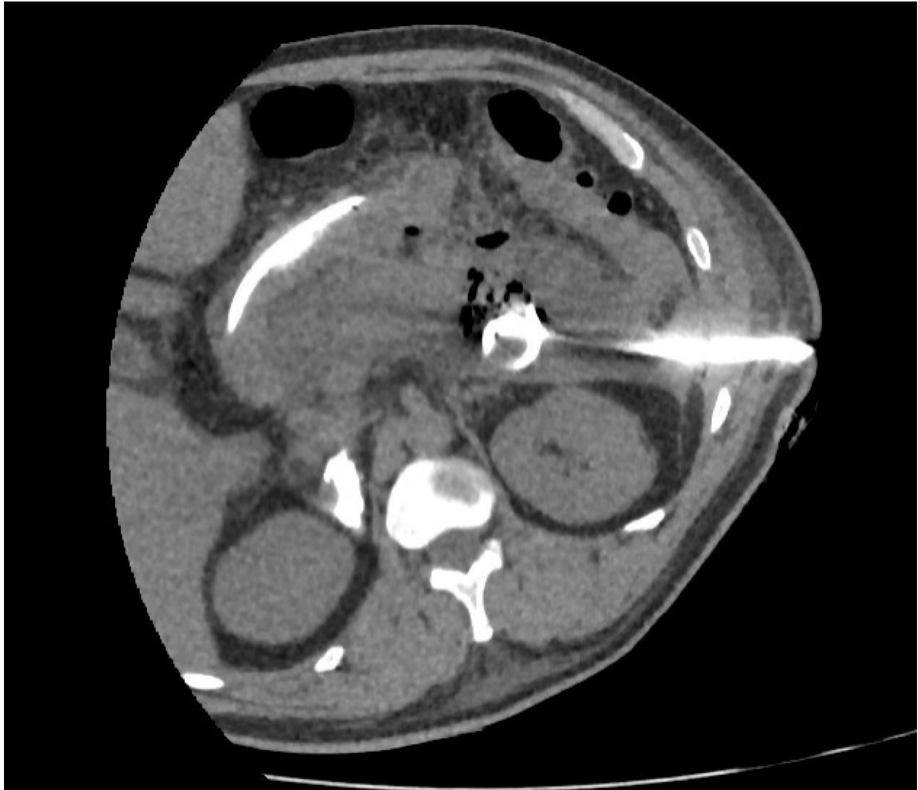






Retroperitoneal endoscopic debridement





Retroperitoneal endoscopic debridement