What New we Have to Offer

—

Rohit Gupta

Learning objectives

1 Describe new treatment modality for an old problem

2 Describe rationale for this shift

3 Describe how to access this

Case Presentation

- 91 years old female admitted with pain RUQ for last three days
- Early dementia and resident of nursing home
- Had previous episode one year ago and got better with antibiotics
- Now pain is not getting better despite being on antibiotics for last three days
- Not able to eat due to pain

Case Presentation

Examination

Tenderness in the RUQ and diffuse fullness in the upper abdomen

No peritonitis

WBC 20.1

Neutrophils 14 .3 with left shift

Hb 109

Platelets 254

LFT reveal AST and ALT of 121 and 79

INR 1.2

Lipase 212

BUN 11

Creatinine 156

Case Presentation

- Urine examination is normal
- X-ray chest reveals mild atelectasis in the lower lung fields
- ECG reveals AF pattern and old infarct

Case Presentation

Past medical History

- DM, HT, COPD, CKD,CAD (previous MI in 2012), AF

- Hypercholesterolemia, Arthritis, sleep apnea, previous heavy smoker

- Morbid Obesity(weight is 103 Kg) Height 5’1”

Case Presentation

Past surgical history

- Open appendectomy(in her 20’s)
- Hysterectomy (in 40’s)
- Ovarian cancer treated with laparotomy and postoperative chemotherapy (in 80’s)

Case Presentation

Medications

- Huge list which includes Eliquis

Allergies

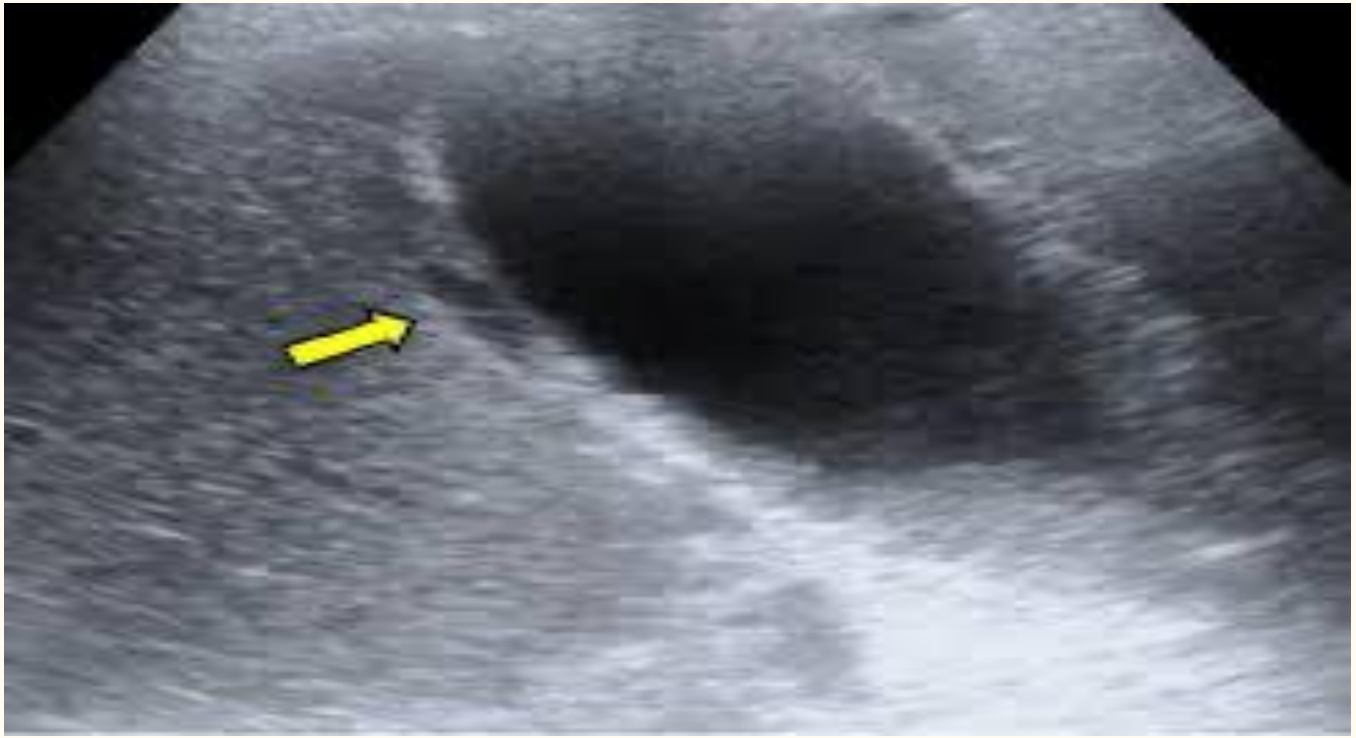
- PCN

Case Presentation

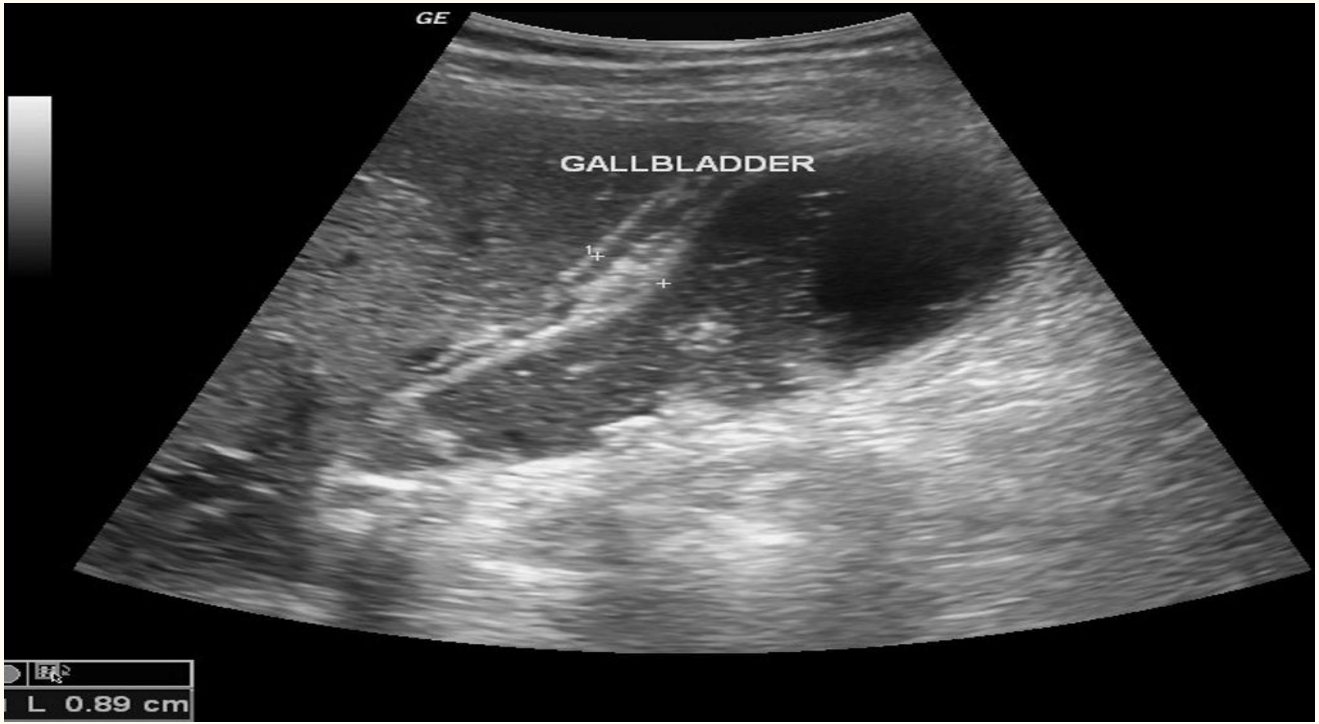
Ultrasound (done on day of admission)

- Distended , thick walled gallbladder , small amount of pericholecystic fluid
- Multiple stones ++
- Murphy sign +
- Bile duct, pancreas is normal
- Liver enlarged and fatty

Case Presentation



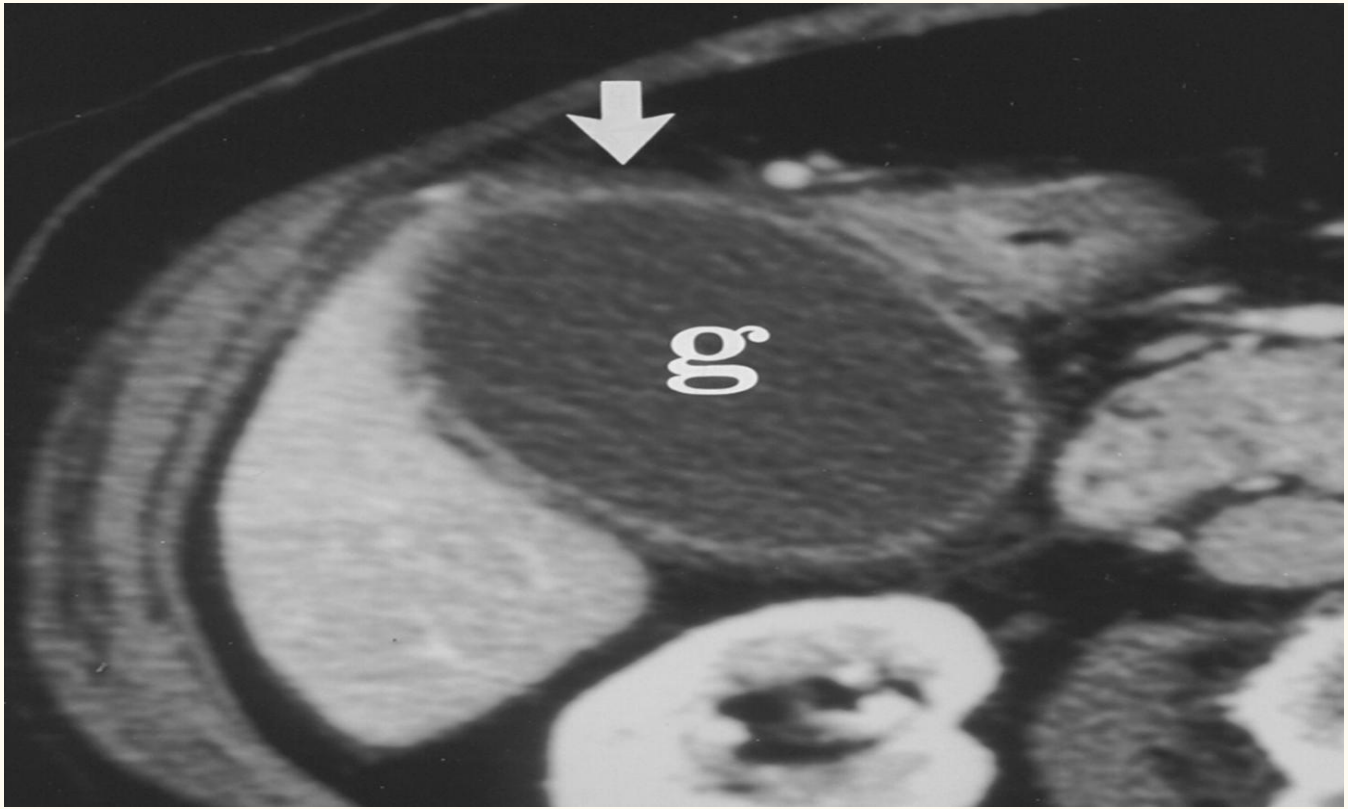
Case Presentation



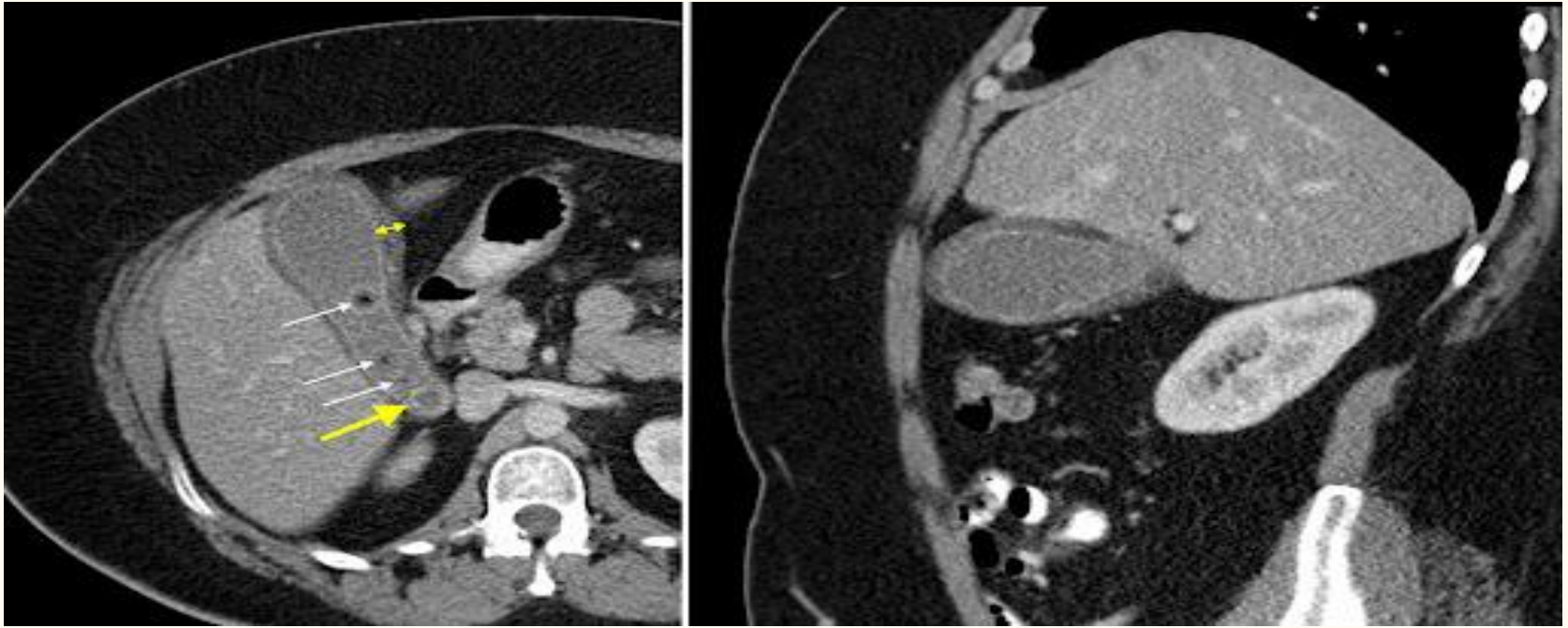
Case Presentation

CT scan done on day 4 of admission

Case Presentation



Case Presentation



Clinical Status

- Pain is not better despite being on Ceftriaxone
- WBC is going up
- Tenderness same or increasing (hard to say given her dementia)

What Do We Do Now?

Conundrum??

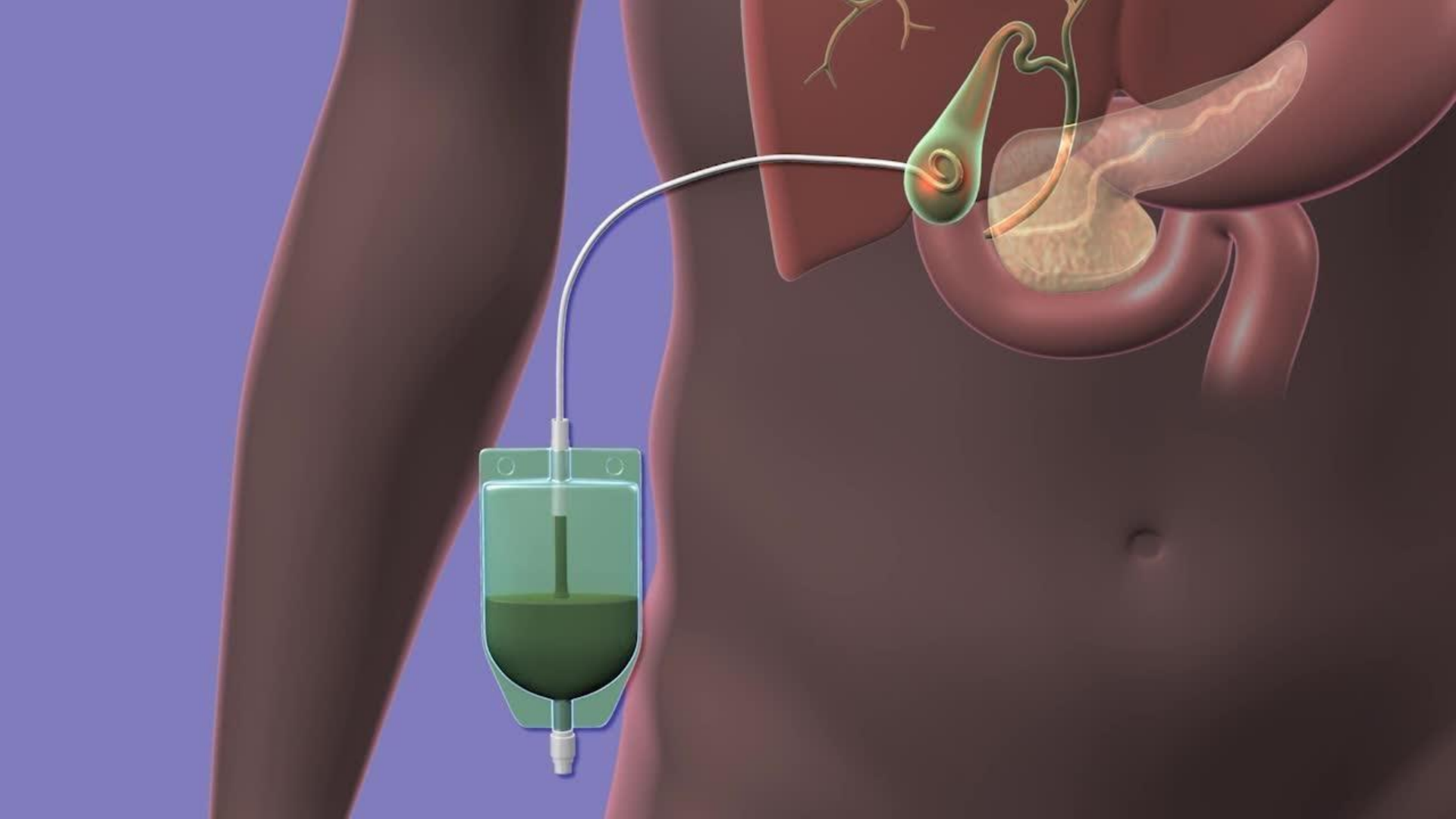
Conundrum Continues

Options

ANYBODY???

Potential Options

- Change antibiotics
- Bite the bullet and operate
- Percutaneous drain
- Palliative care (family not ready for that)
- Any other option

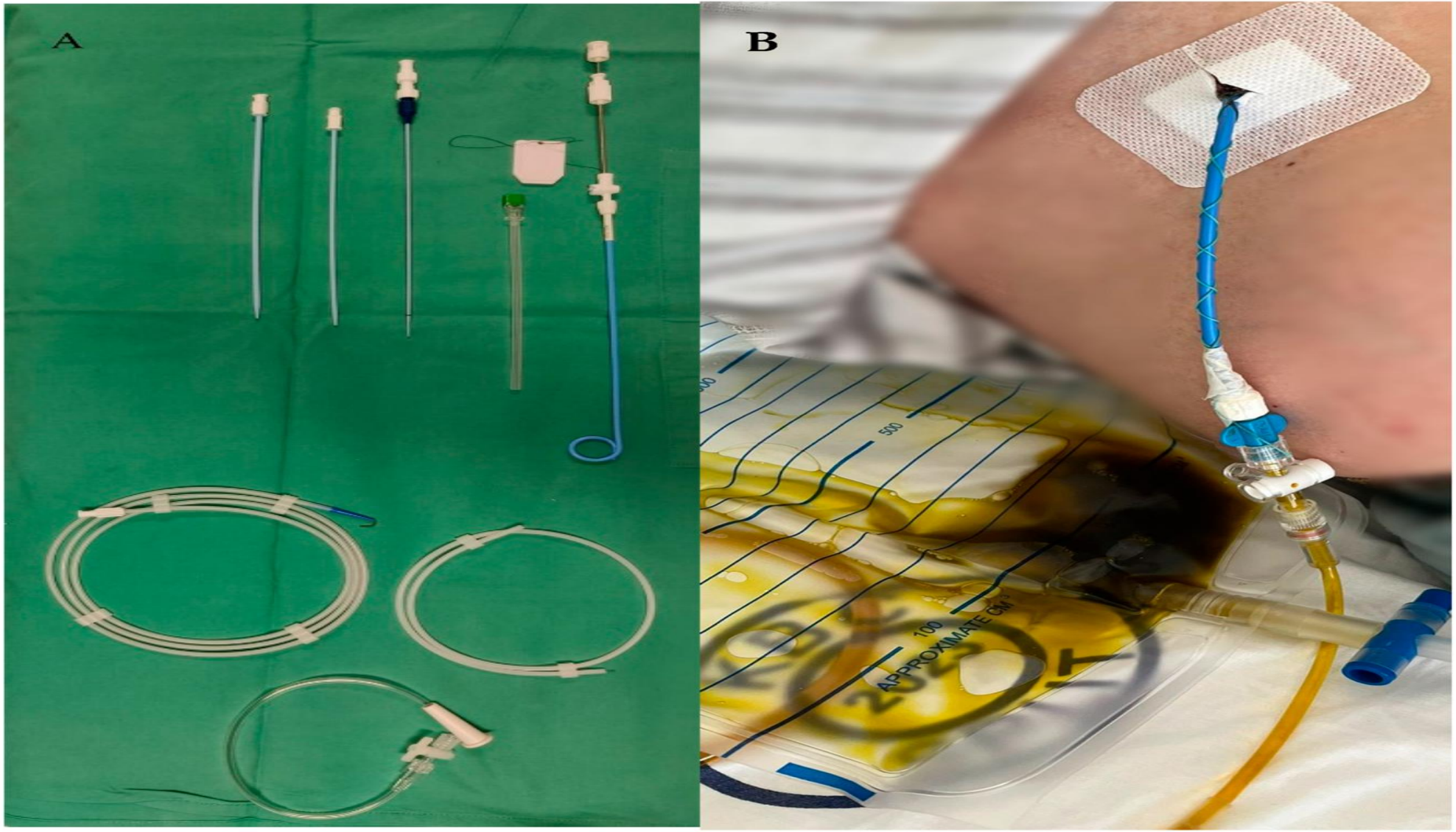


Potential Barriers

Done by Interventional radiologist

- Availability issues

- Transport issues


A
B
500
100
APPROXIMATE CM

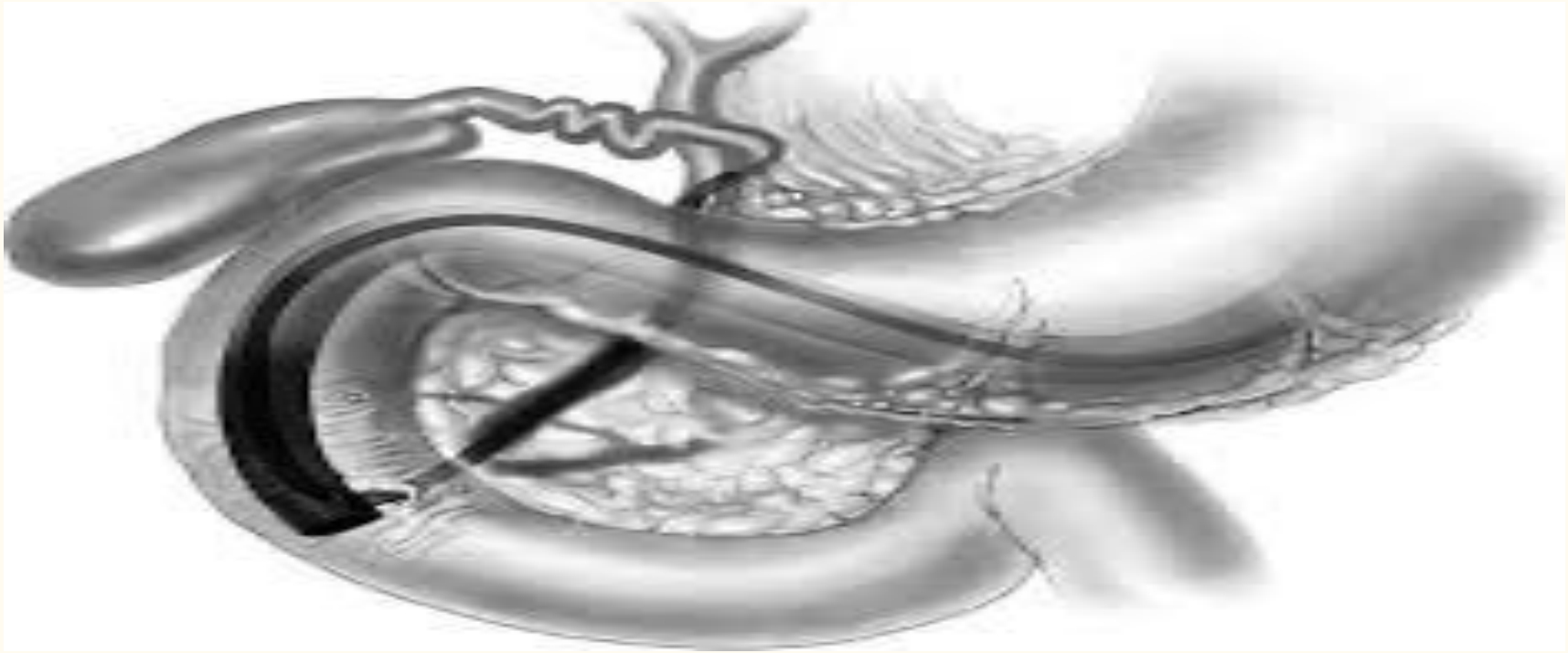
Challenges with Percutaneous Drain

- Uncomfortable
- Needs regular management with dressing and emptying etc
- Accidental dislodgement
- Patient pulling if confused
- Needs to be there for 8 weeks to have proper maturation of the tract
- Recurrence rate

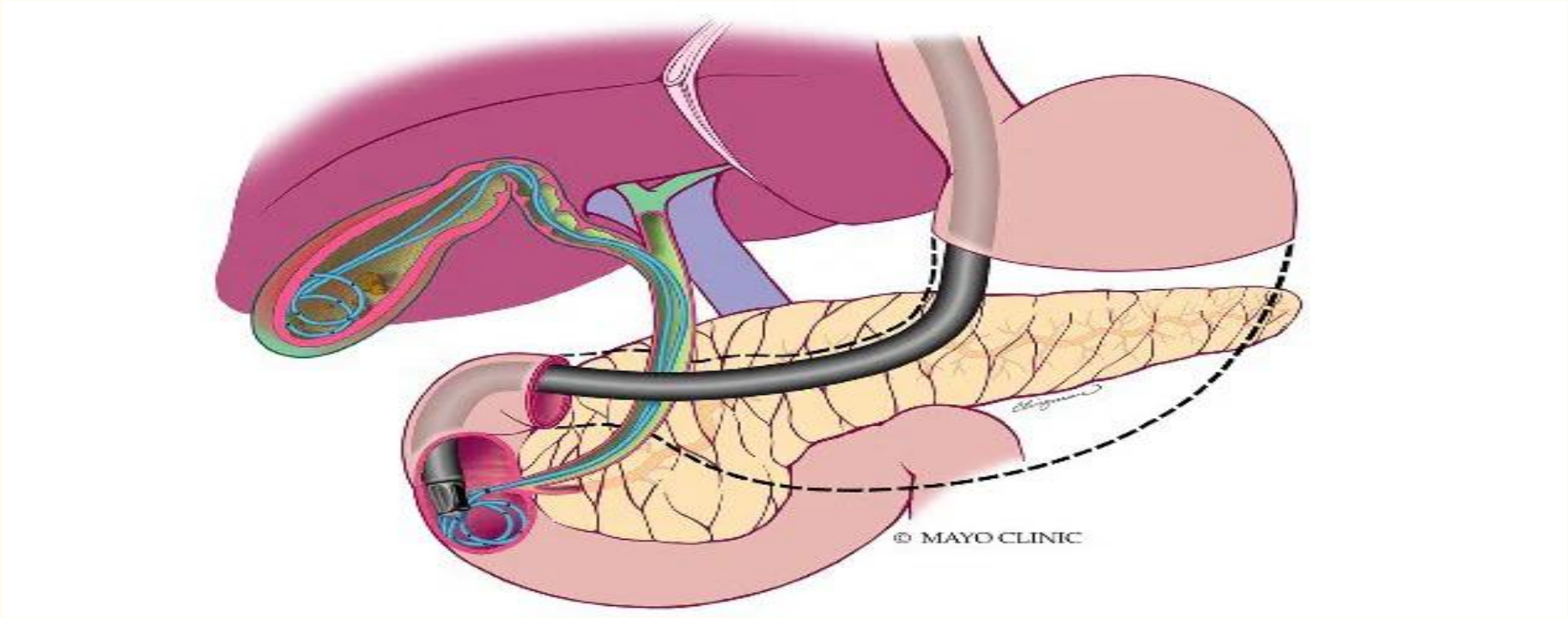
Another Option

- ERCP and stent insertion to have internal drainage of the gallbladder

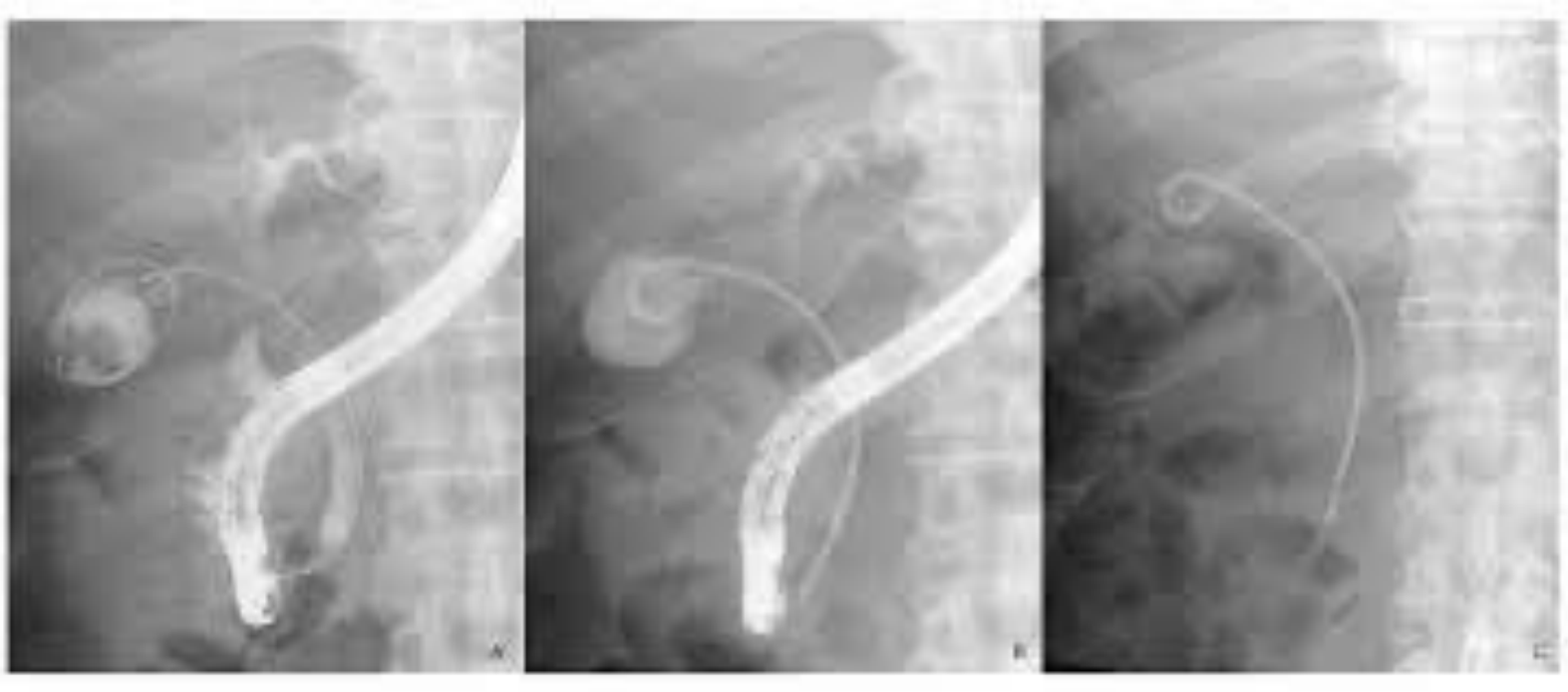
ERCP with internal drainage



ERCP



ERCP



Limitations

- More tricky to get in to cystic duct than bile duct due to tortuosity and valves
- Not doable in case cystic duct is blocked
- Associated risks inherent to ERCP

New Kid on the Block

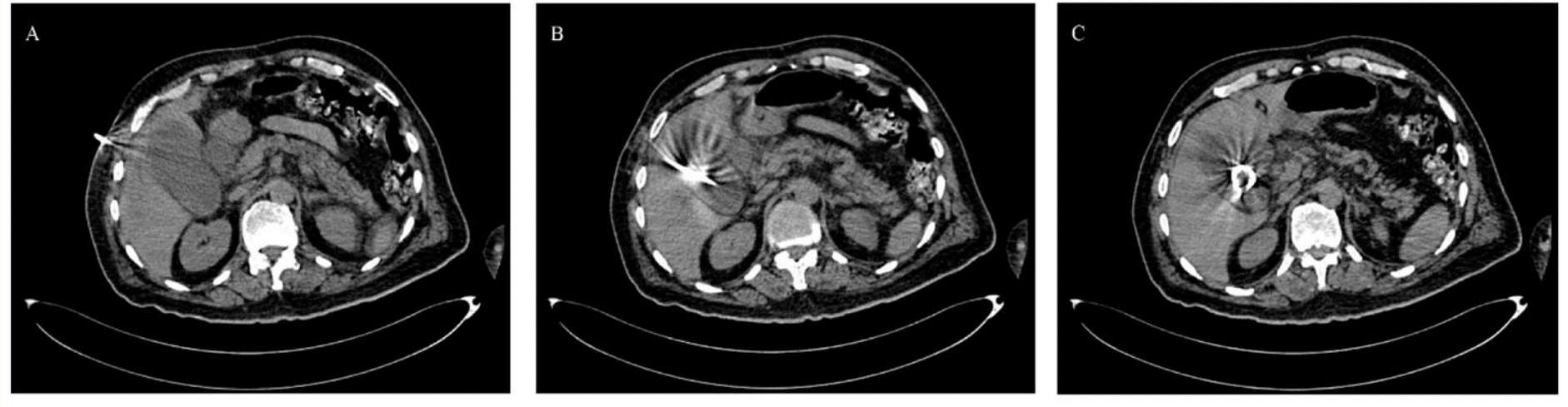
- EUS

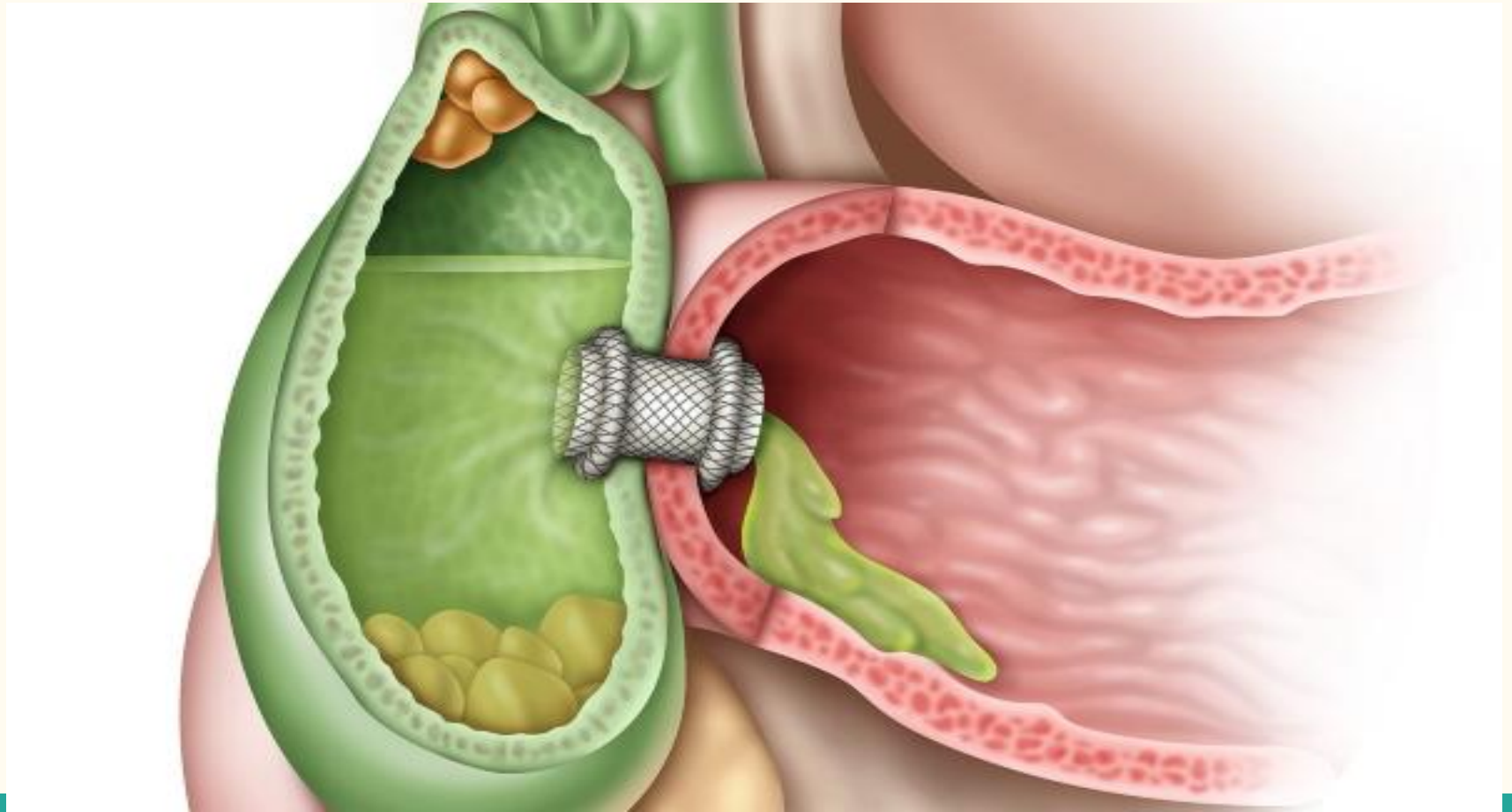
EUS

- EUS with internal drainage

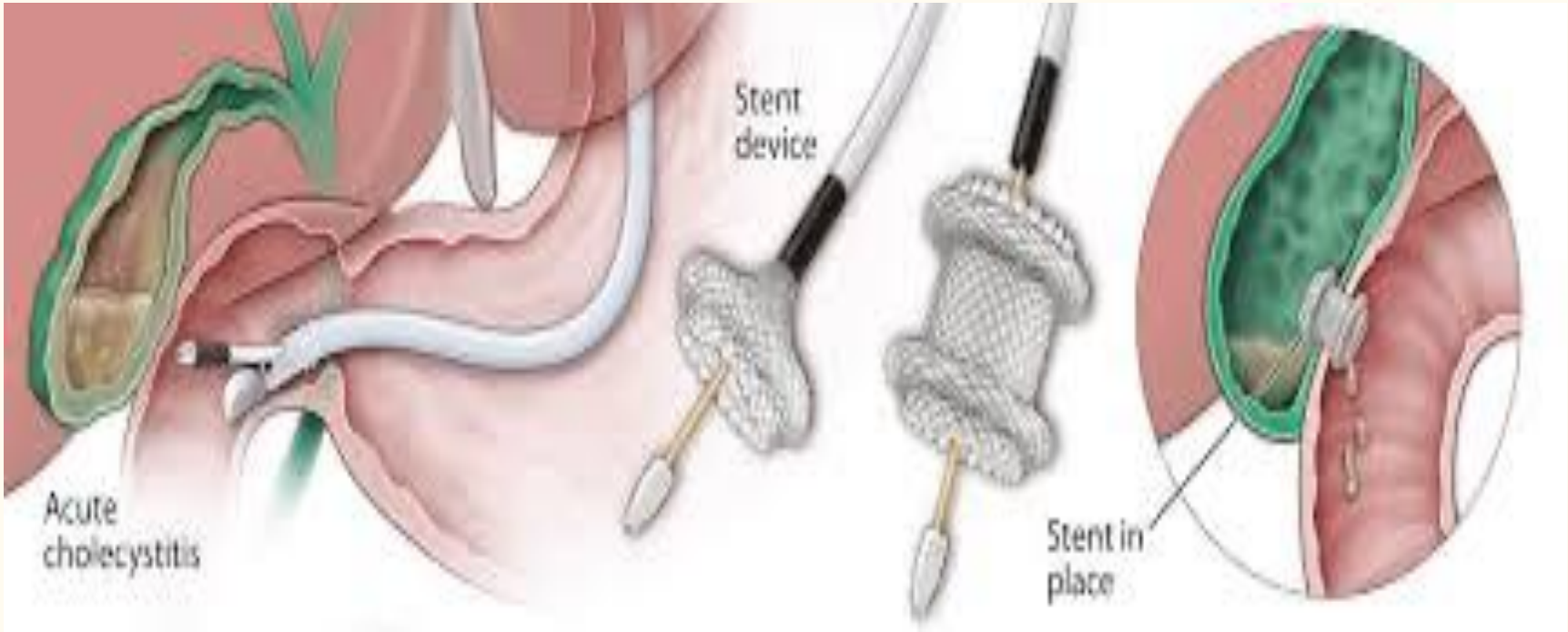
- Either to stomach or duodenum

CT assessment





EUS



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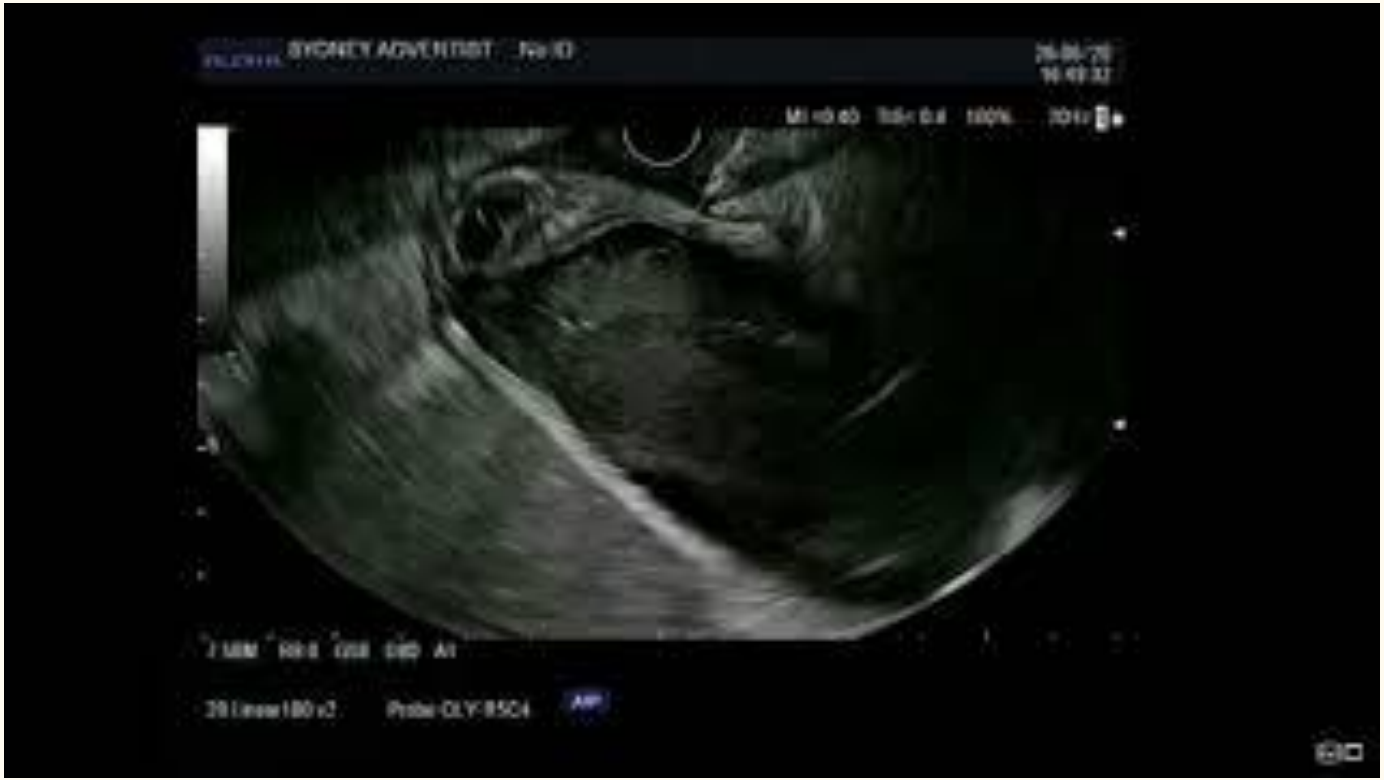

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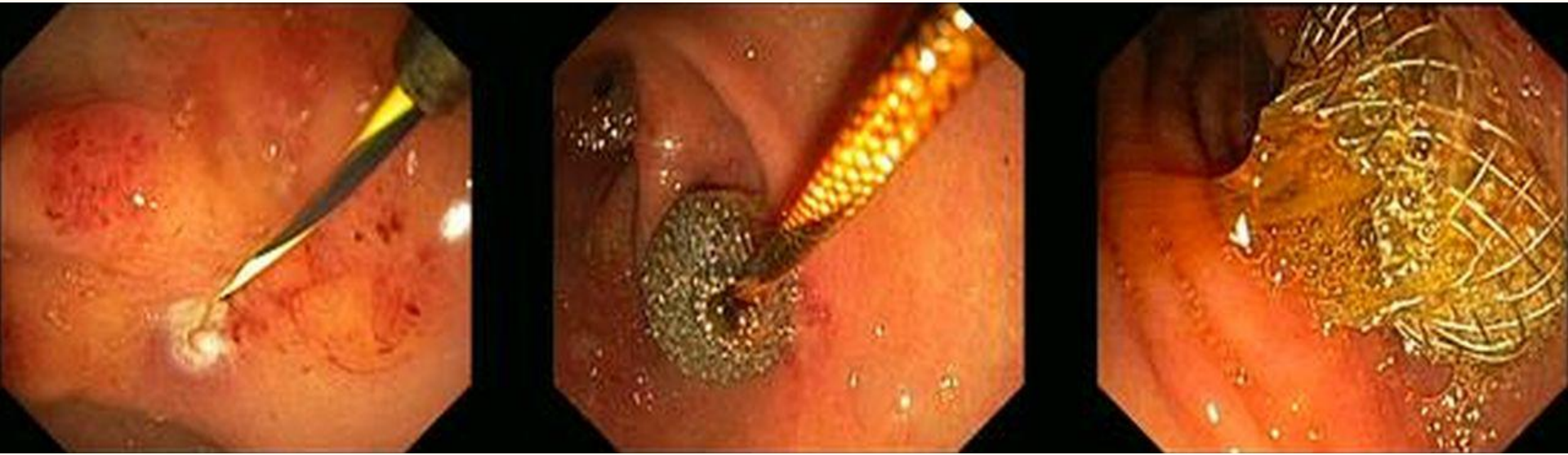


EUS

Pros

- No outside bag
- Lumen apposing stent
- Permanent treatment
- No need for GA
- Quick recovery

EUS

Cons

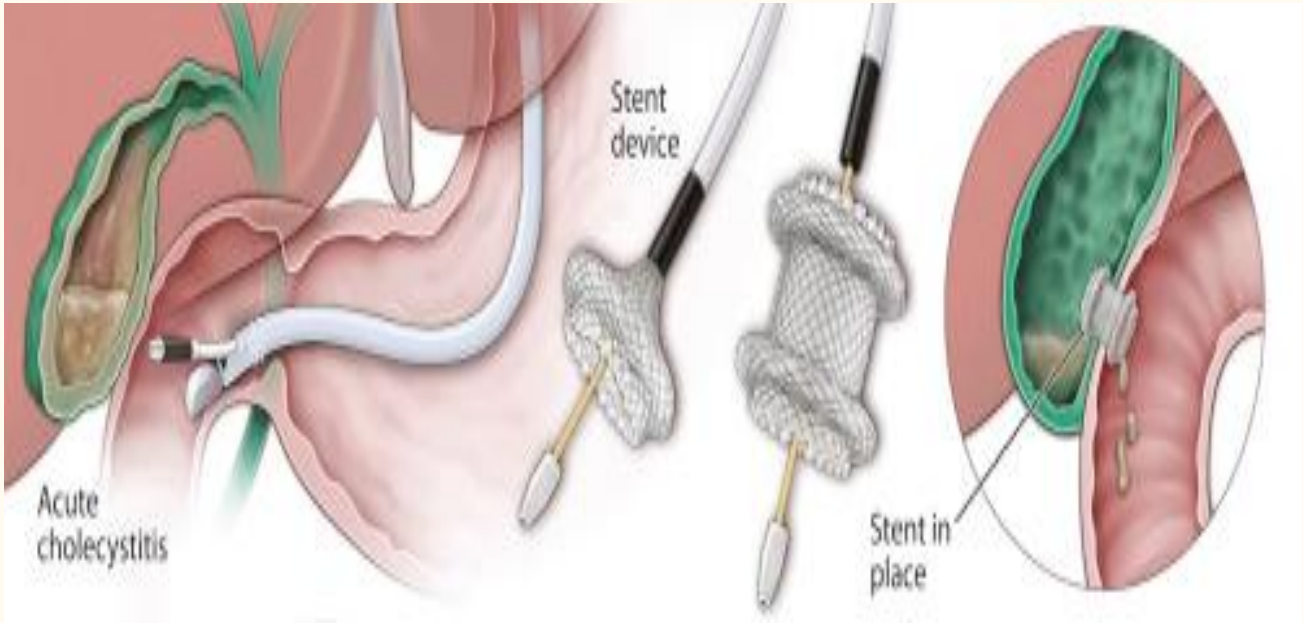
- Stent cost
- Expertise
- Need for sedation
- Complication risk

EUS

Complications

- Anesthesia related
- Perforation
- Bleeding
- Stent migration
- Mal deployment
- Theoretical risk of food going in the gallbladder
- Long term consequences? Cancer

EUS



Considerations

- INR
- Fibrosed gallbladder with small size (strategies are there)
- Perforated and gangrenous gallbladder (combined procedures)
- Not even a candidate for sedation(rare)
- Gallbladder cancer

Special mention

- Can be used as bridge for acute cholecystitis treatment
- Prefer to do drainage in stomach if surgery is planned
- Higher chance and risk for conversion to open surgery

Take home message

- Difficult situation
- Combined team effort with surgery, medicine and radiology
- There is hope and options available

EUS-guided gallbladder drainage with a lumen-apposing metal stent (with video)

S Irani, TH Baron, IS Grimm, MA Khashab - Gastrointestinal endoscopy, 2015 - Elsevier

copic. **EUS-guided** transmural **gallbladder**

drainage (**EUS**-GBD… Our aim was to describe the outcome after **EUS**-GBD with a lumen-…

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… **gallbladder drainage** is considered the treatment of choice. In particular, **endoscopic**

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… Based on the meta-analysis of **EUS-guided gallbladder drainage** done in 1437 patients from

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… **gallbladder drainage** (ETGBD) and **endoscopic ultrasound** (**EUS**)-**guided gallbladder**

drainage (… ETGBD and EUSGBD have the advantage of offering the patient internal **drainage** …

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EUS-guided gallbladder drainage for malignant **biliary** obstruction: A new paradigm but not so new

F Kamal - Gastrointestinal Endoscopy, 2023 - giejournal.org

… The treatment options for **biliary drainage** in these patients include percutaneous

transhepatic **biliary drainage** (PTBD) or **EUS-guided biliary drainage** (**EUS**-BD). **EUS**-BD is an …

Thank You