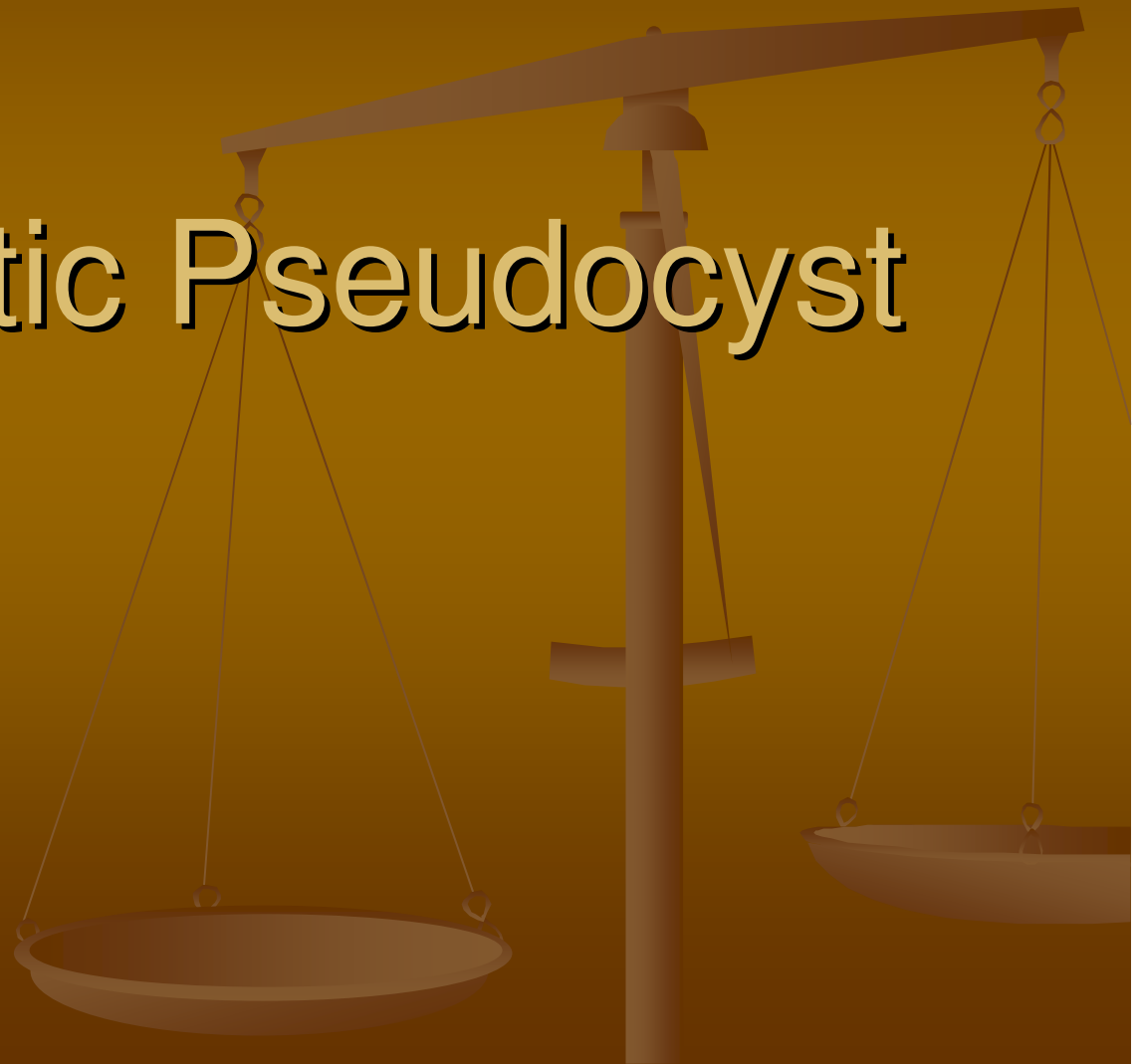


Pancreatic Pseudocyst



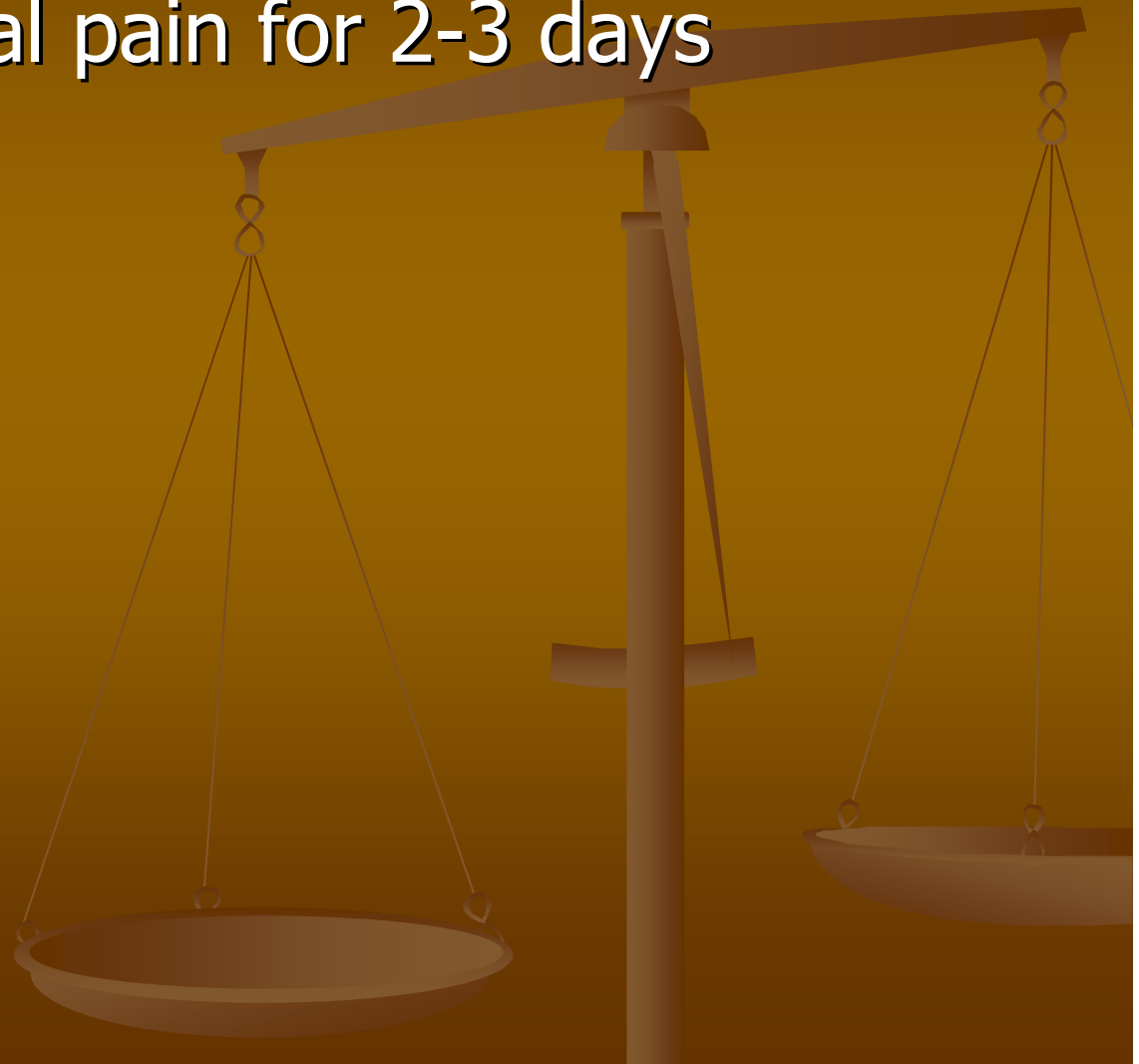
Patient Data

- 陳X仁
- 40 years old
- male



Chief Complaint

- Upper abdominal pain for 2-3 days

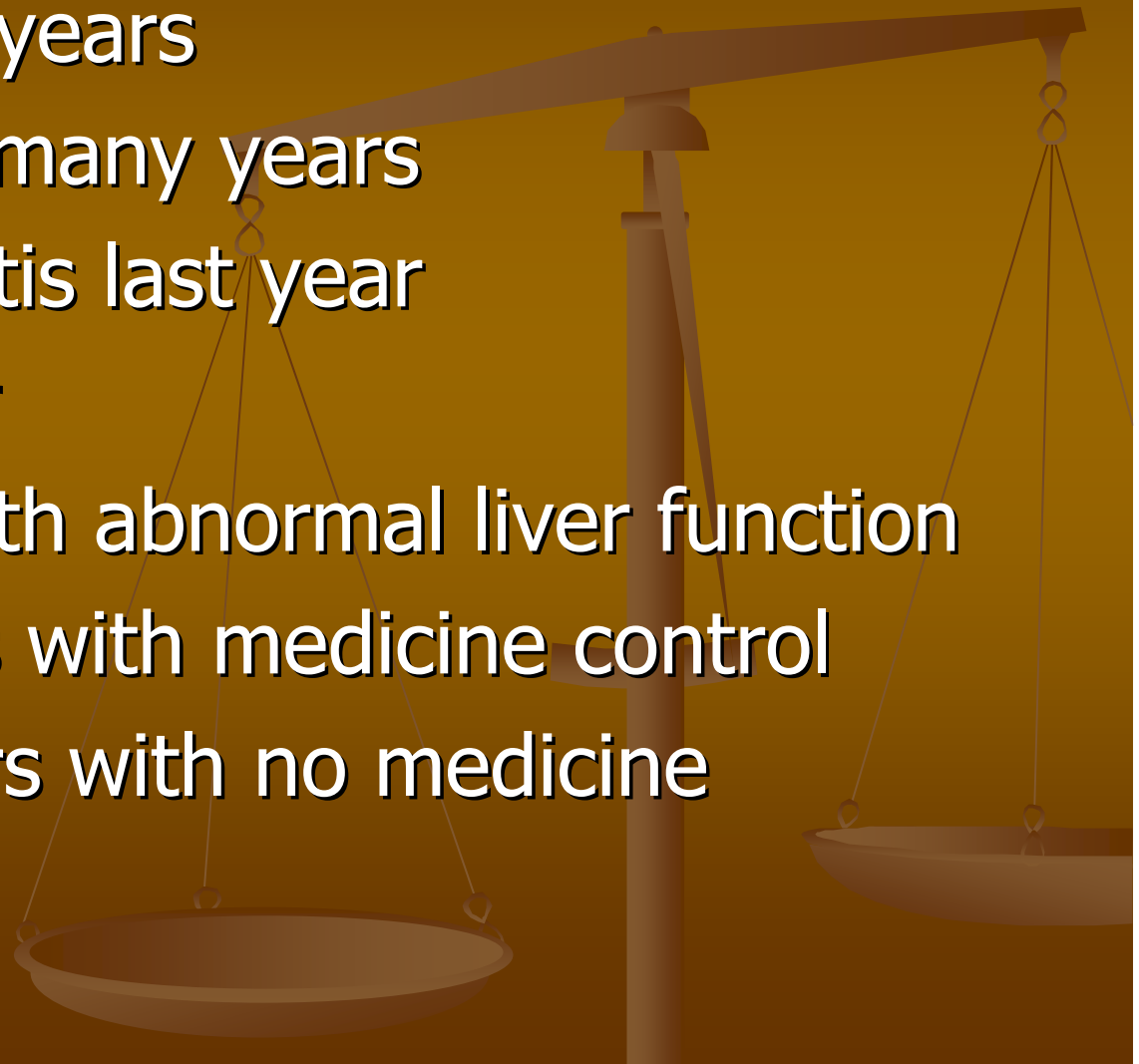


Present Illness

- 95/9/11
- This 40 year old male patient got progressively dull abdominal pain since 3 days before admission. The pain can not be released by changing position. On the day of onset , chillness with high fever flared up to 39 degrees. Then the pain progressed severe and migrated to LUQ.

Past History

- Drinking for 10 years
- Smoke 1-2PPD many years
- Acute pancreatitis last year
- Hepatitis carrier
- Icteric sclera with abnormal liver function
- HTN for 2 years with medicine control
- Gout for 2 years with no medicine



Lab Data



■ 取樣日期	950911	950912	950915
■ 取樣時間	1628	0708	0856
■ Glucose	281		
■ CRP	20.80	18.40	13.10
■ Lip			75
■ Albumin	2.7	1.9	
■ Na	134	136	134
■ K	3.0	3.1	4.5
■ Ca	8.3		

Image

- **KUB: A large opacity with air-fluid level in the left abdomen, r/o abscess**

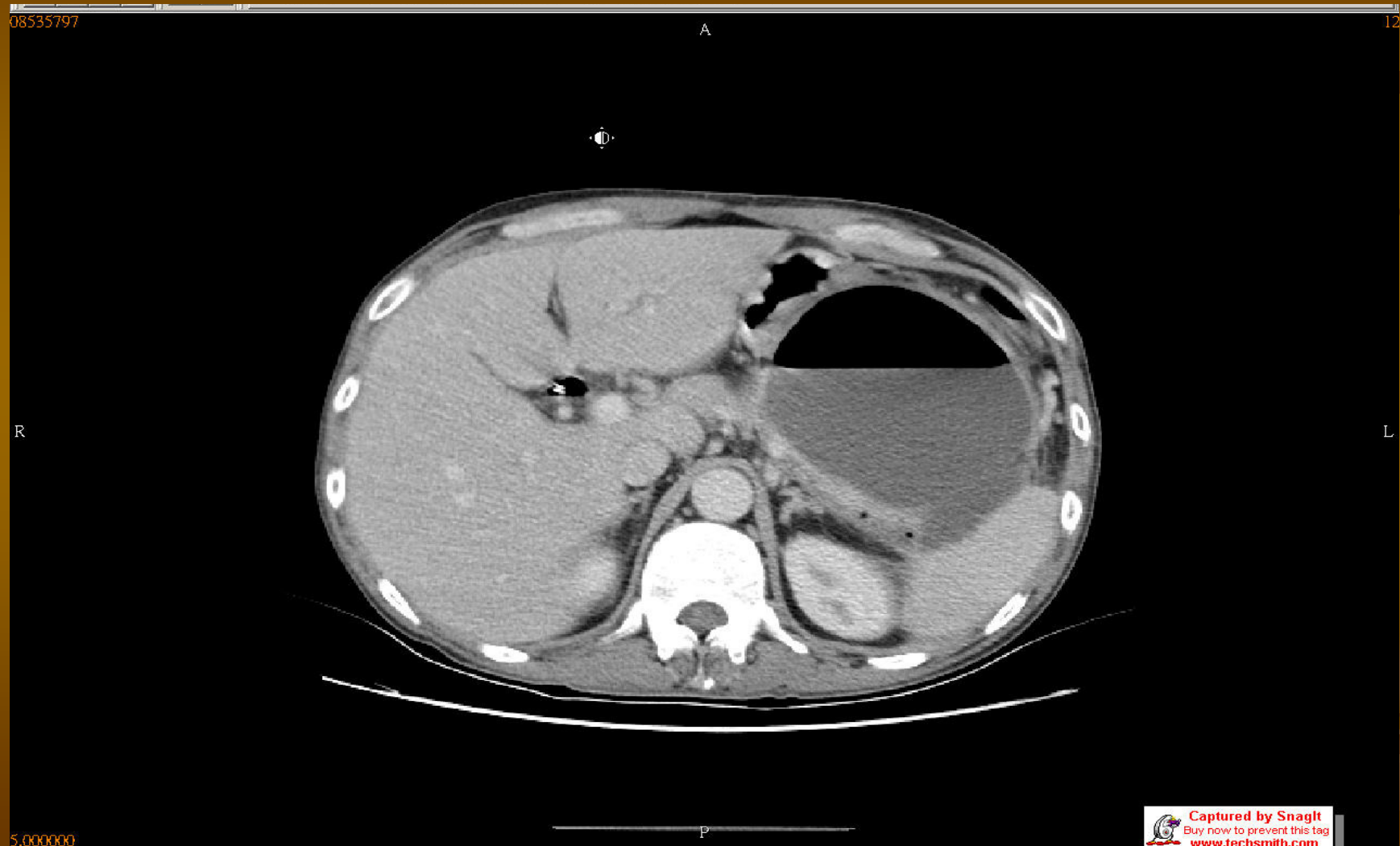


Image

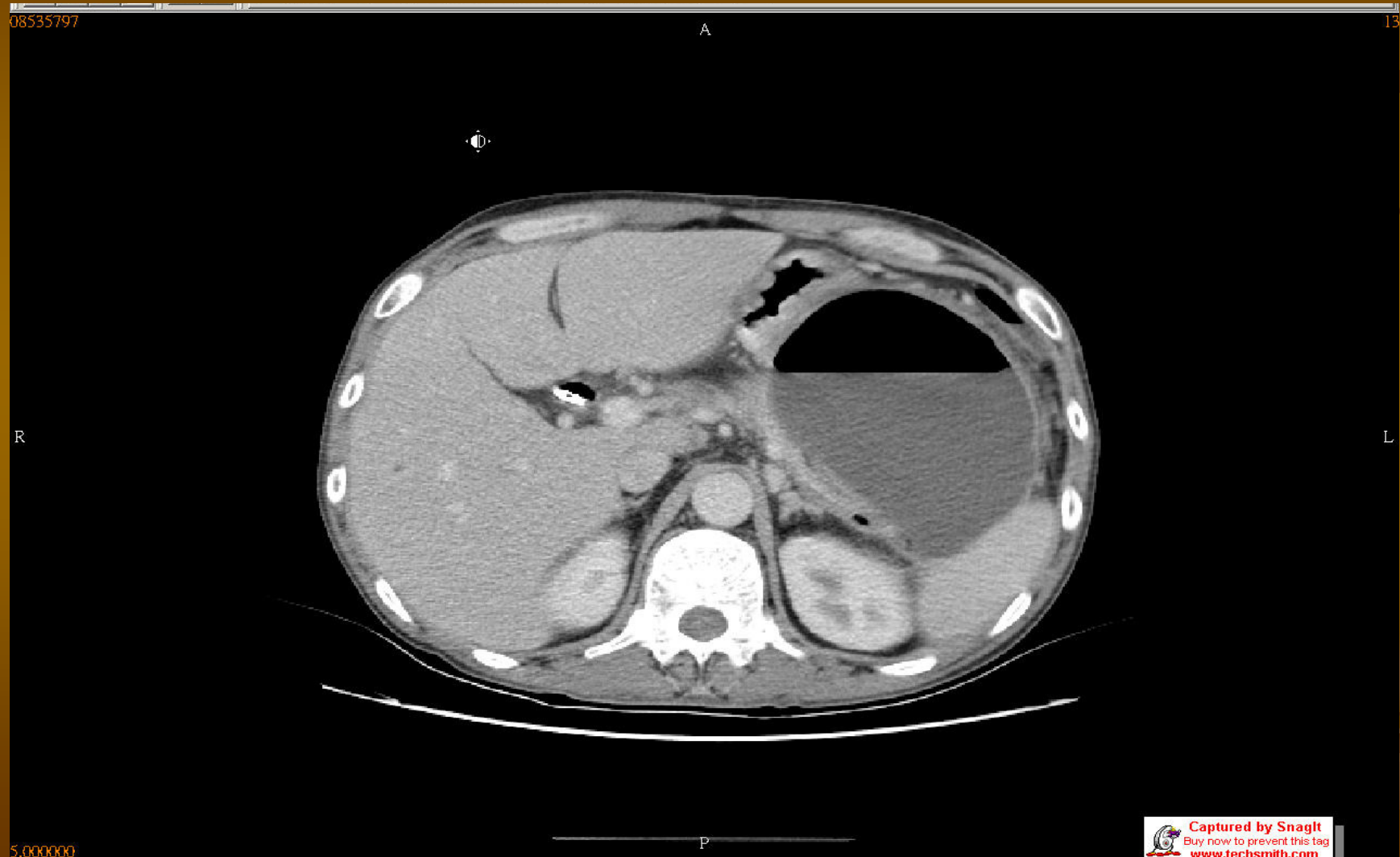
- ECHO: there was a **11 x 8.7 cm cystic** lesion with multiple **hyperechoic hyperechoic central foci**, at the position of pancreatic tail, near GB fossa



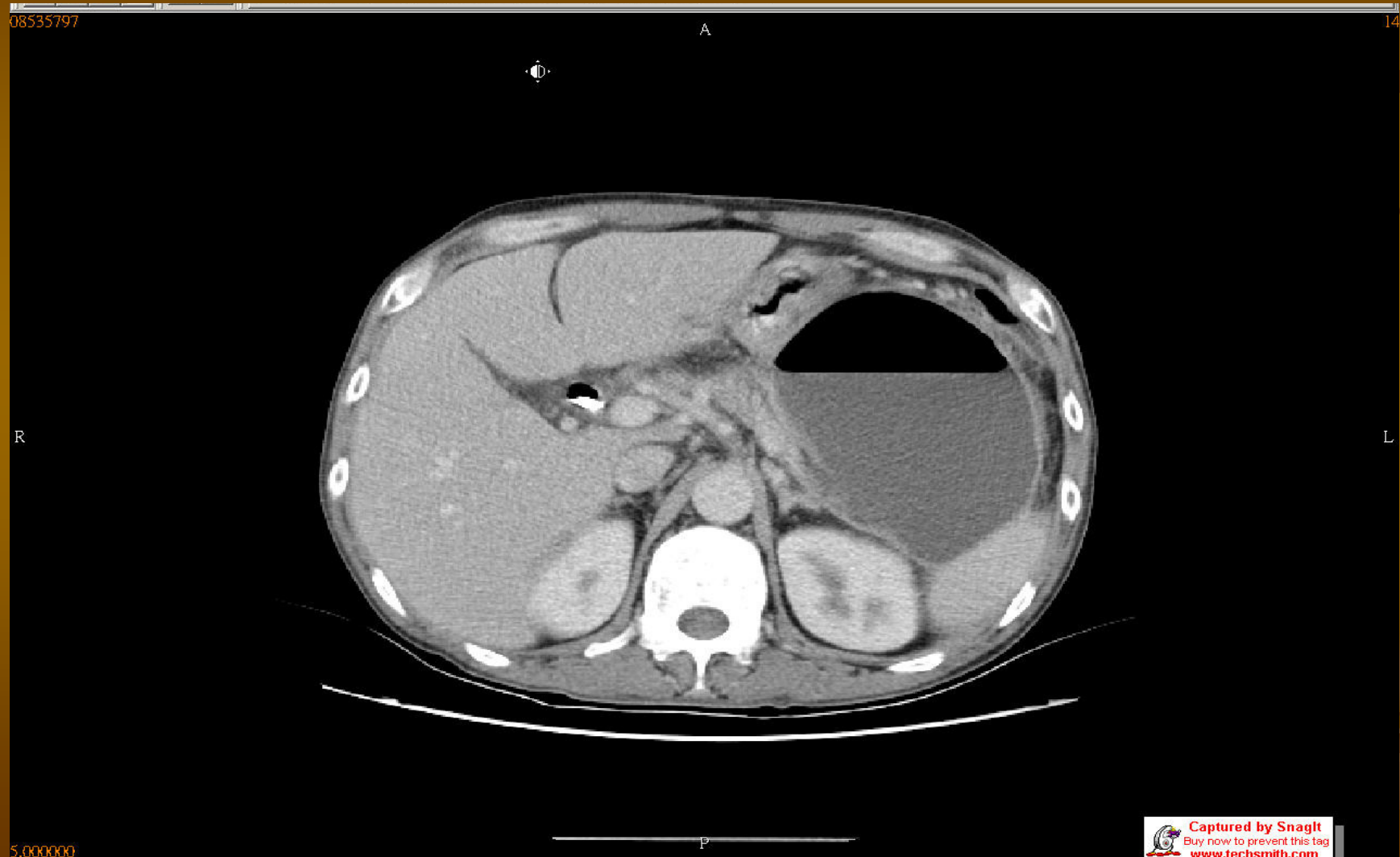
Image



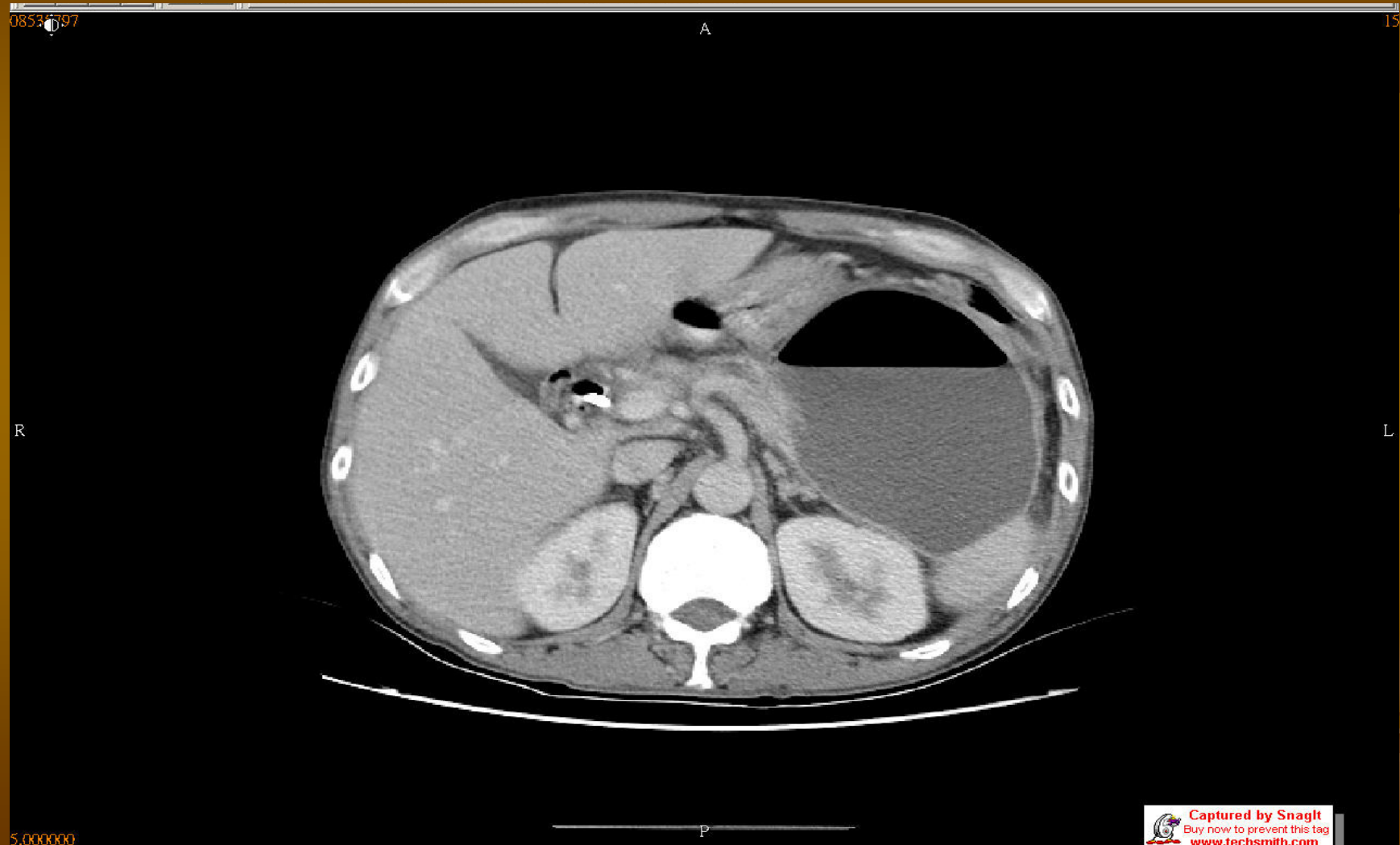
Image



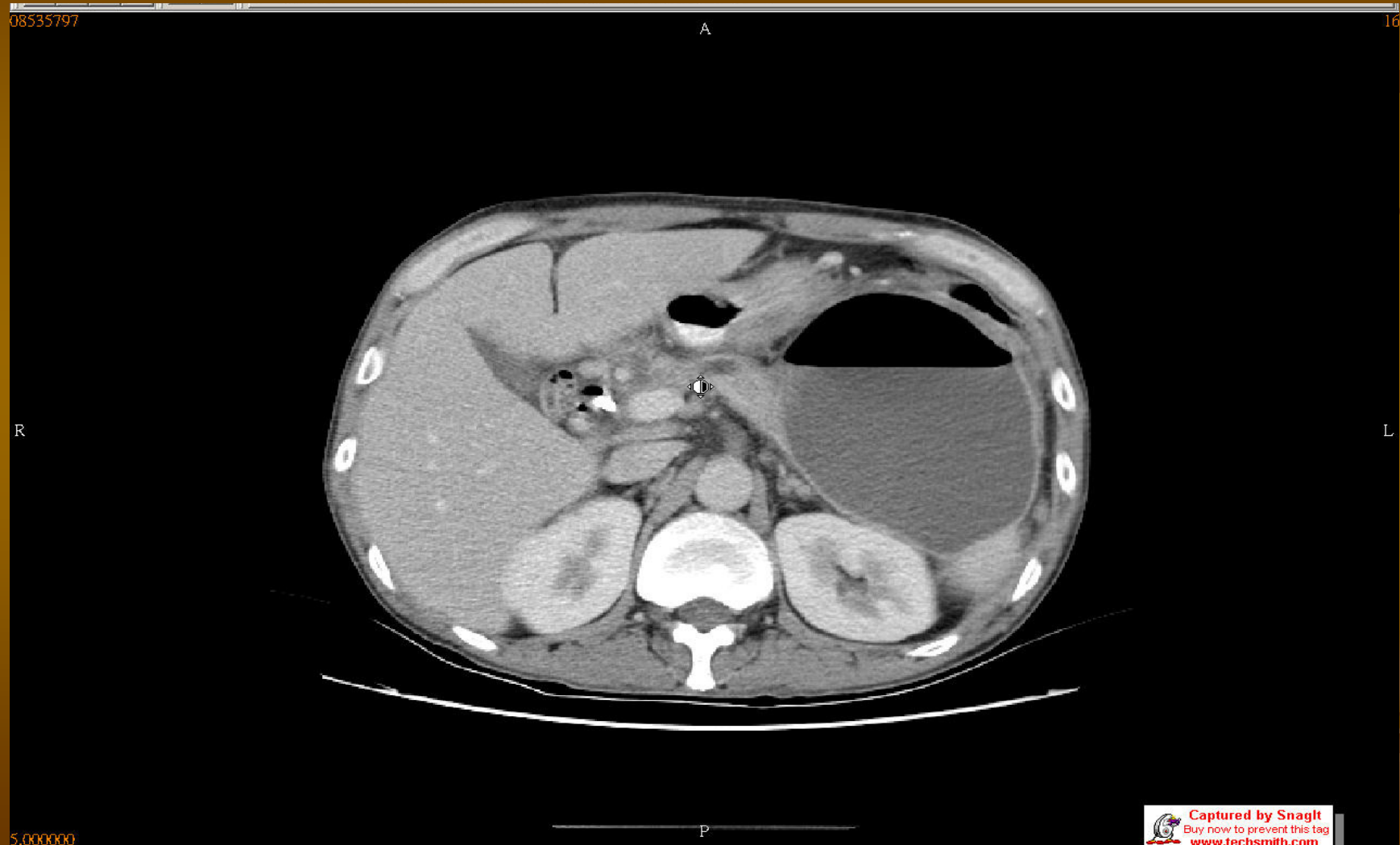
Image



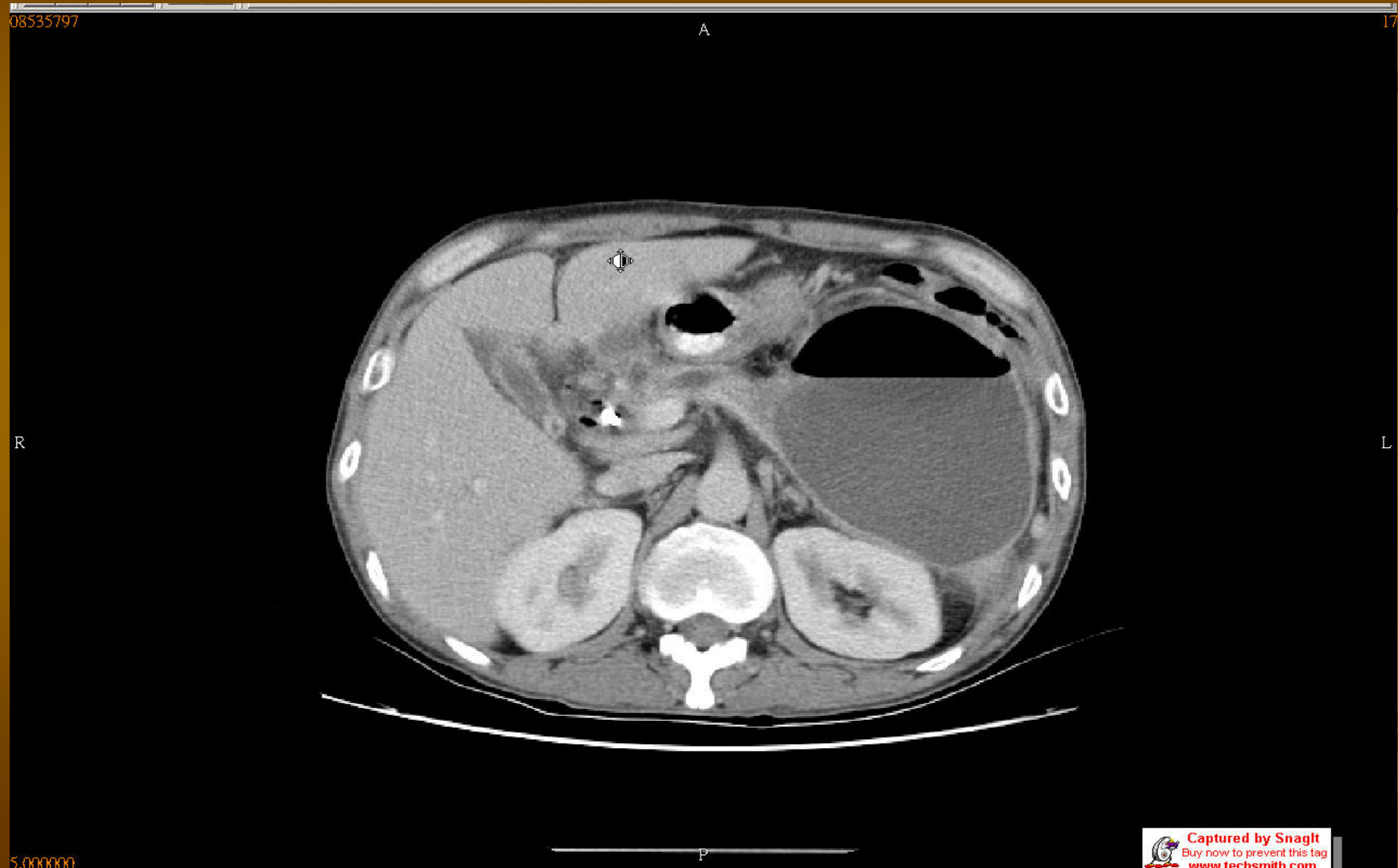
Image



Image



Image



Image

- CT: There is an encapsulated, rim-enhanced fluid collection cystic mass about **9x12 cm in dimension**, at left abdomen region situated
- **Air-fluid level within the cystic mass**, infectious pseudocysts or communicating with adjacent bowel or pancreatic duct should be considered.

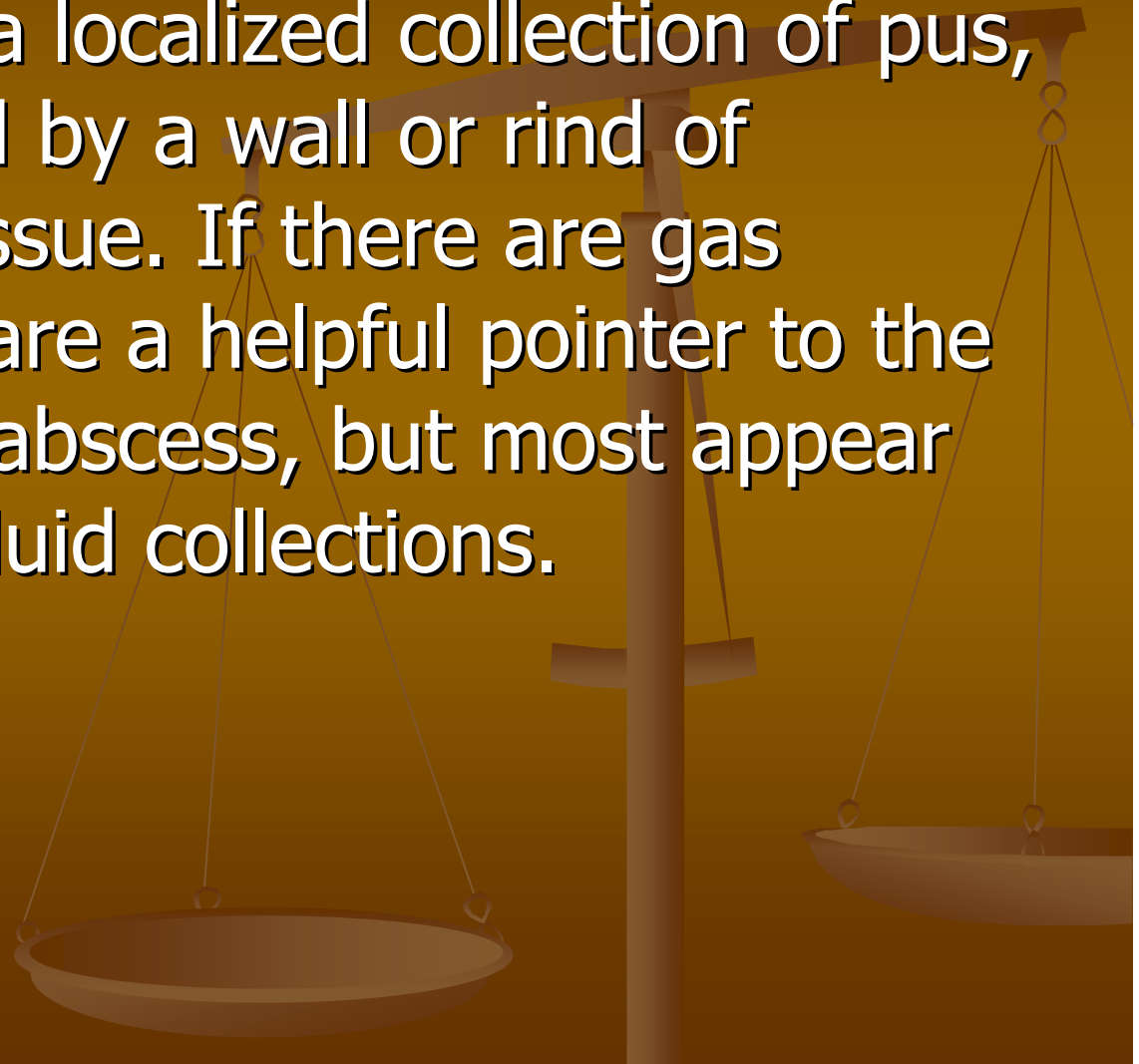
Differential Diagnosis

- Pancreatitis
 - Pancreatic abscess
 - Pancreatic pseudocysts
- Pancreatic Tumors
 - Cystic masses



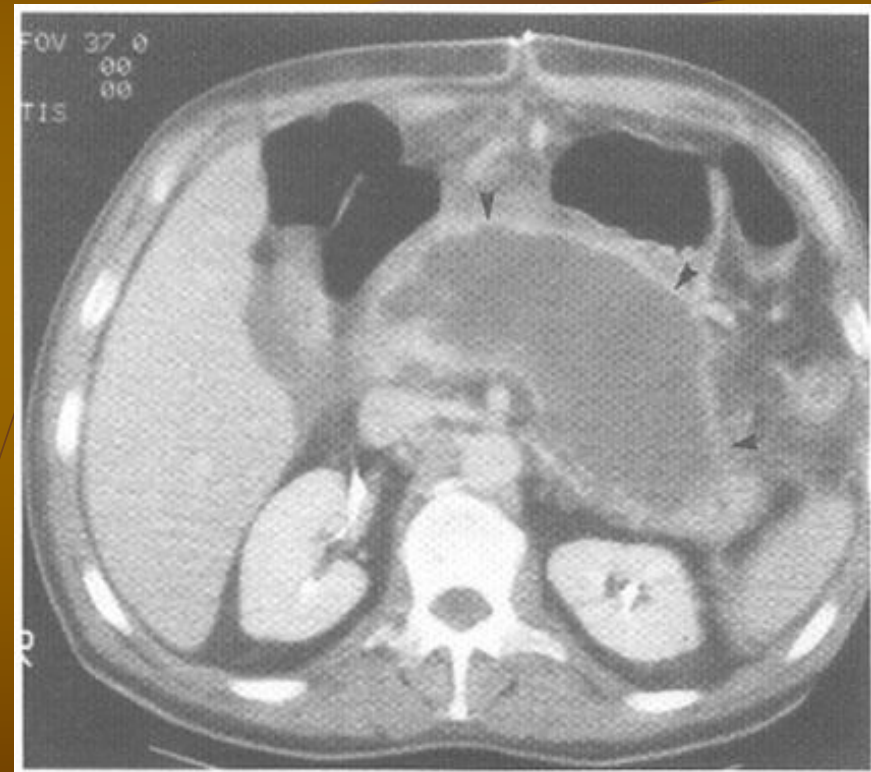
Pancreatic abscess

- This is seen as a localized collection of pus, usually confined by a wall or rind of inflammatory tissue. If there are gas bubbles, these are a helpful pointer to the presence of an abscess, but most appear as nonspecific fluid collections.



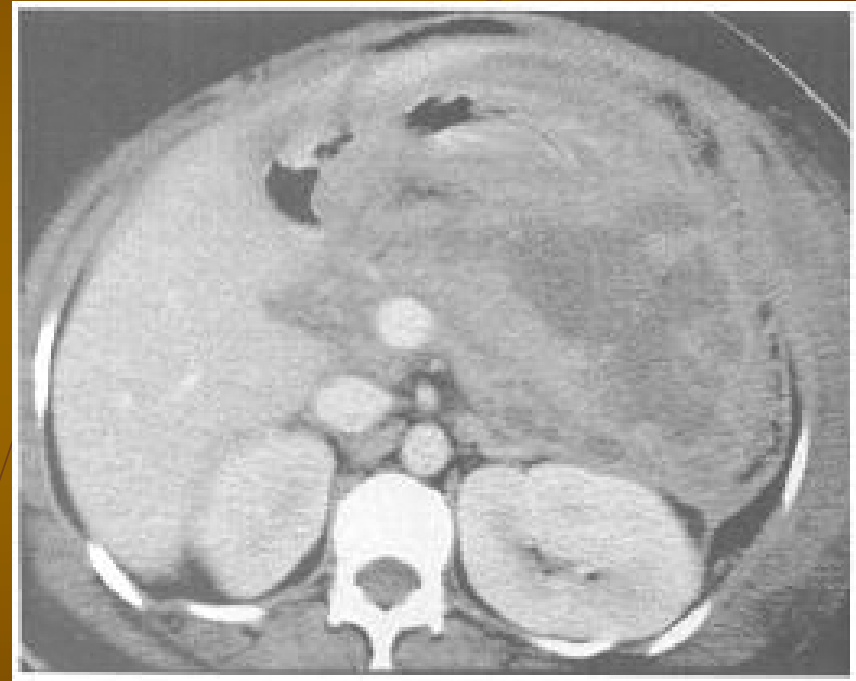
Pancreatic abscess

- **Pancreatic abscess**
- CT shows a fluid collection with a contrast-enhancing capsule



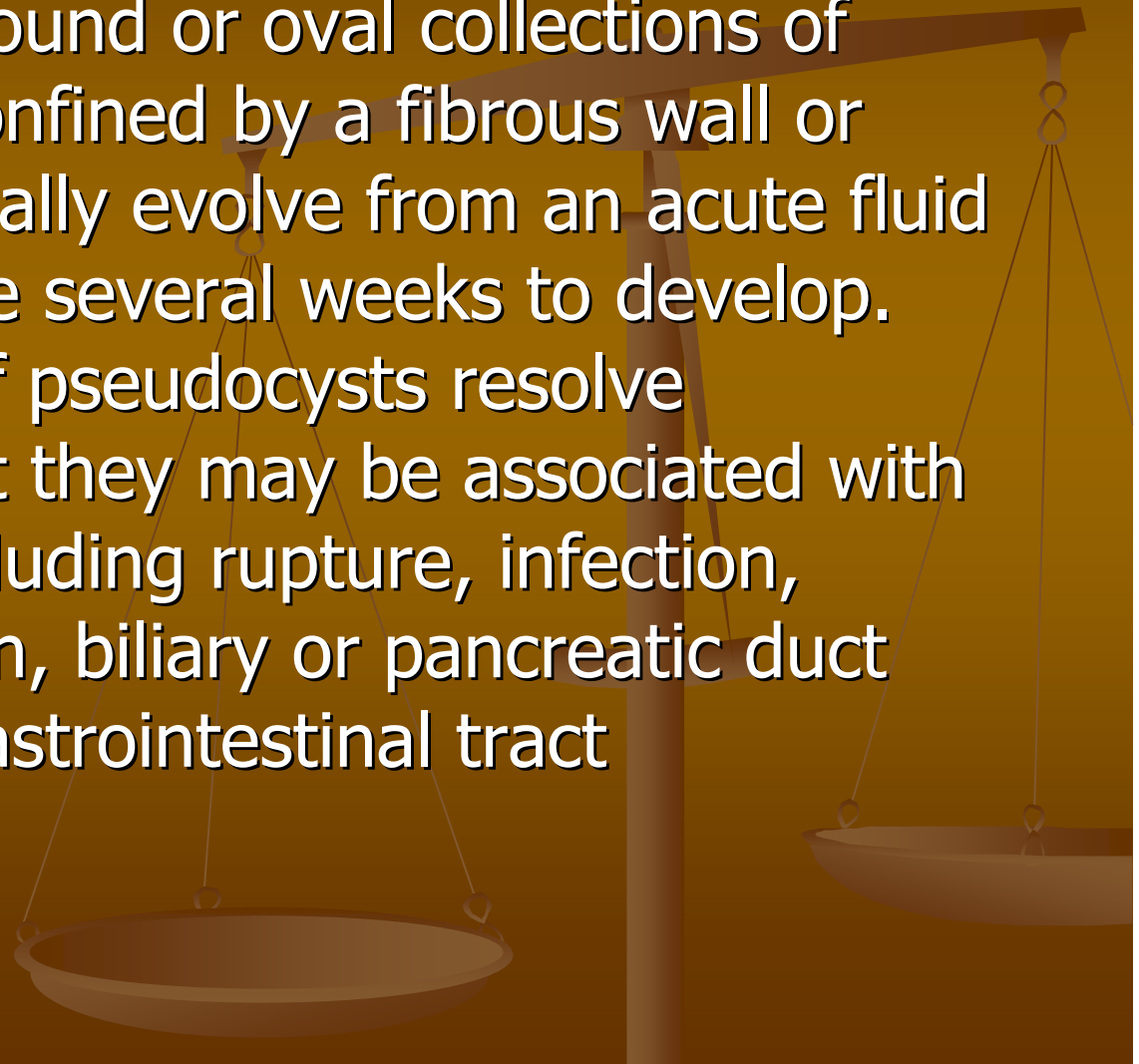
Pancreatic abscess

- **Pancreatic abscess containing necrotic debris**
- solid necrotic tissue contained within



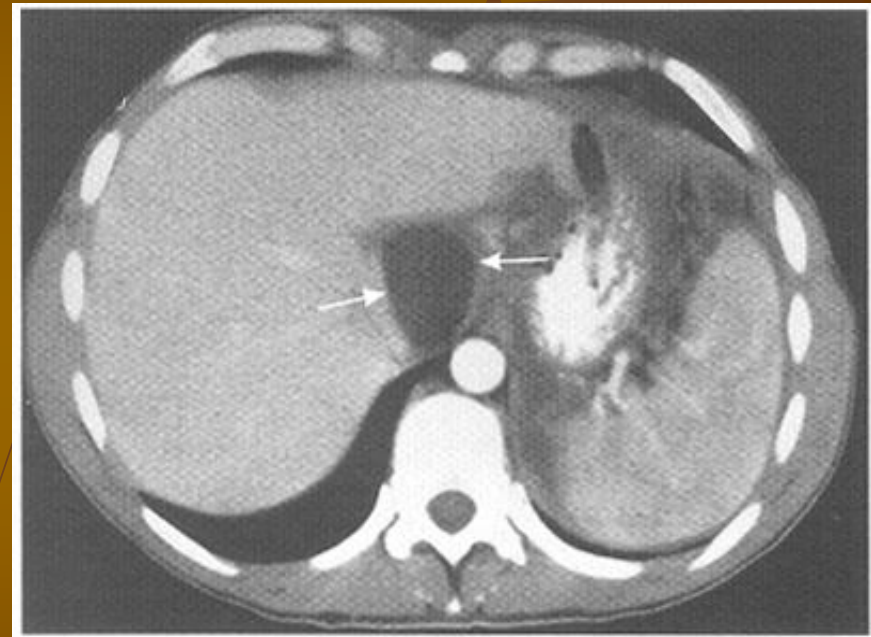
Pseudocysts

- Pseudocysts are round or oval collections of pancreatic fluid confined by a fibrous wall or capsule. They usually evolve from an acute fluid collection and take several weeks to develop. More than 50% of pseudocysts resolve spontaneously but they may be associated with complications, including rupture, infection, haemorrhage, pain, biliary or pancreatic duct obstruction , or gastrointestinal tract involvement.



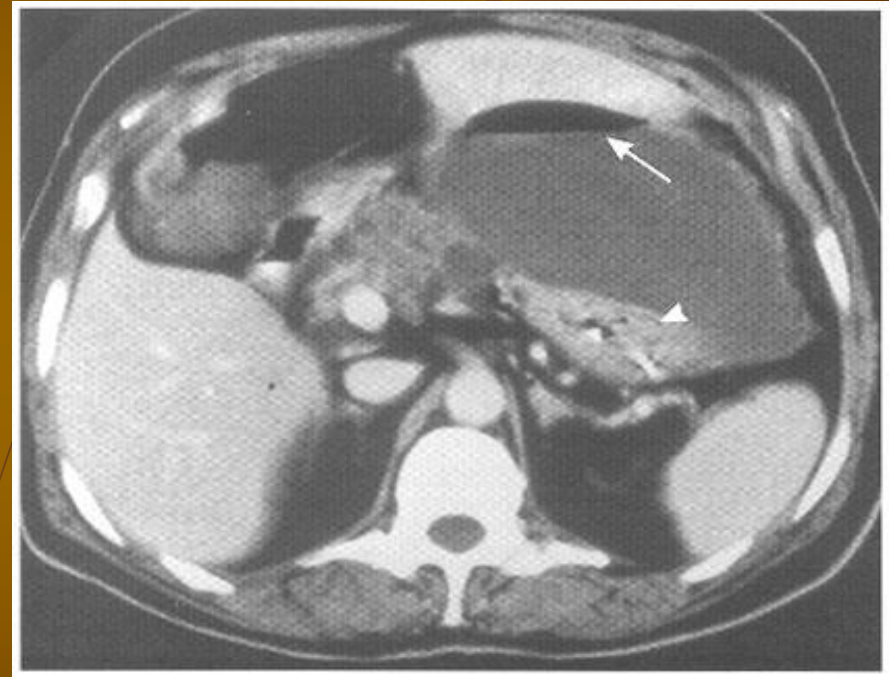
Pseudocysts

- **Pancreatic pseudocyst**
- A well-defined fluid collection with a thin wall lies superior to the pancreas



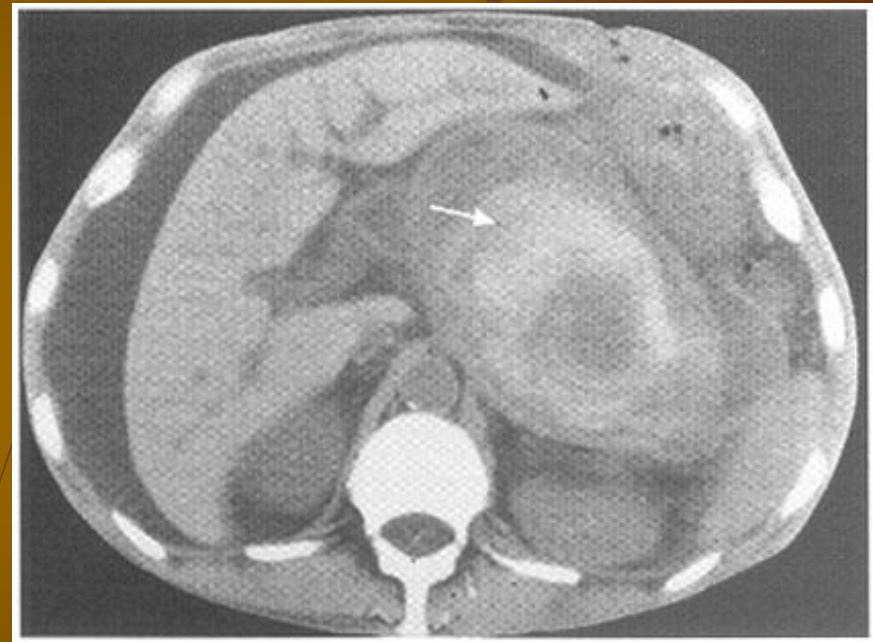
Pseudocysts

- **Infected pseudocyst**
- Gas is seen in the pseudocyst



Pseudocysts

- **Haemorrhage into a pseudocyst**
- High attenuation fresh blood is seen within a well-defined pseudocyst.

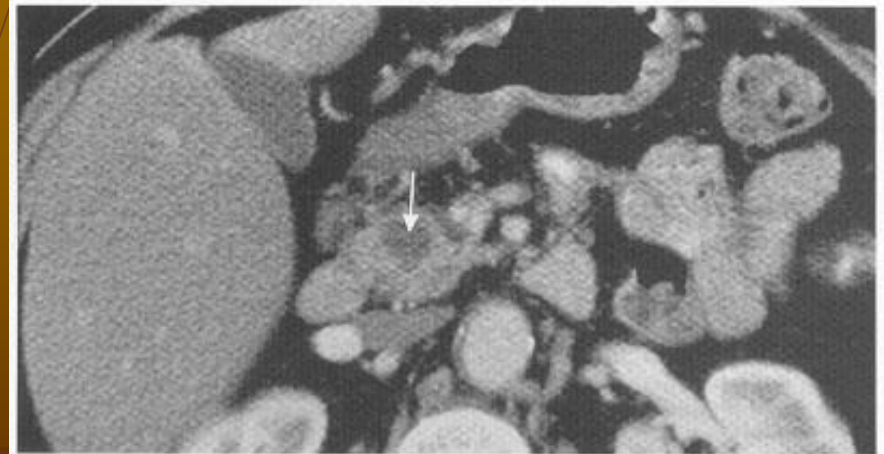


Pseudocysts

- **Small residual pseudocyst causing pancreatic duct obstruction**
- Dilated pancreatic duct in the body of the gland
- Small residual pseudocyst in the pancreatic head



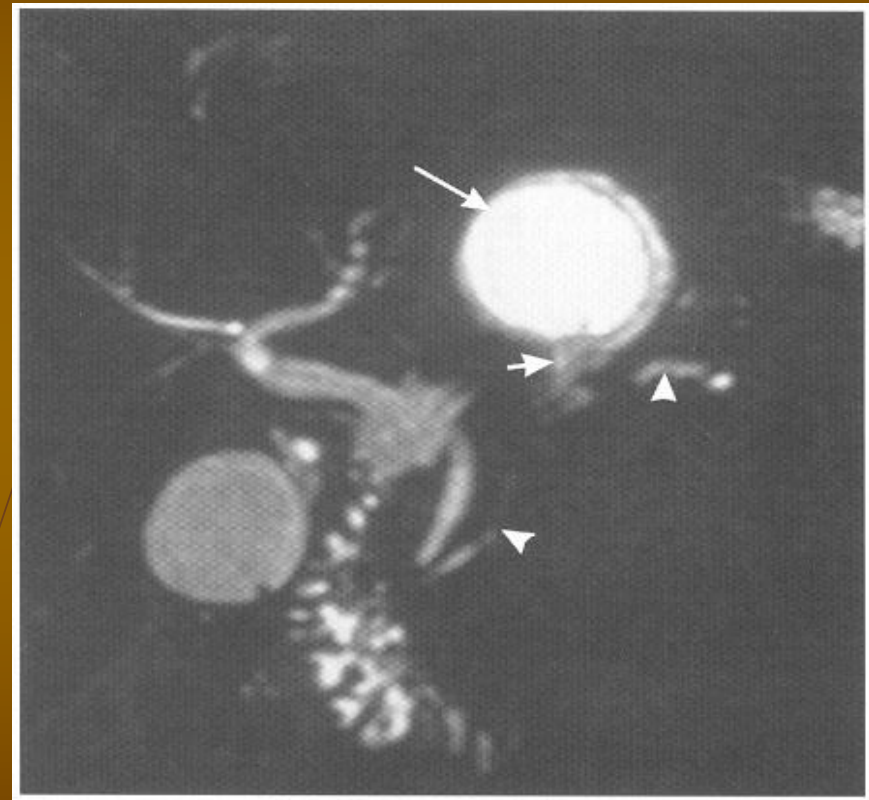
A



B

Pseudocysts

- **Pseudocyst communicating with the main pancreatic duct**
- MRCP showing a pseudocyst. This communicates directly with the pancreatic duct

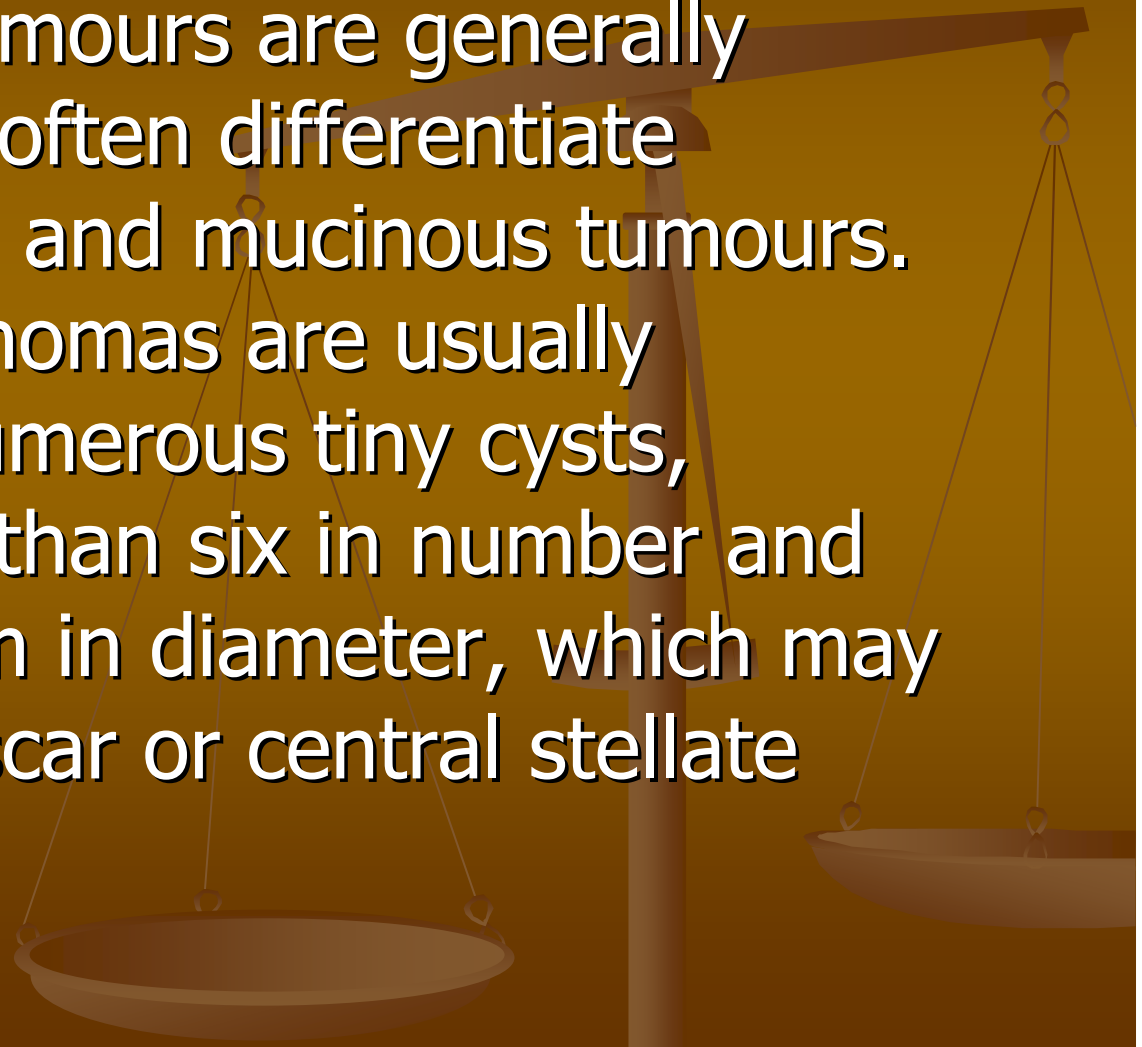


Cystic masses

- The commonest cystic mass in the pancreas is the pseudocyst, but cystic pancreatic tumours may also occur. These may be broadly divided into mucinous and serous types. Mucinous cystic neoplasms are the more common. There is a spectrum from benign to malignant lesions but ultimately most behave in a malignant fashion

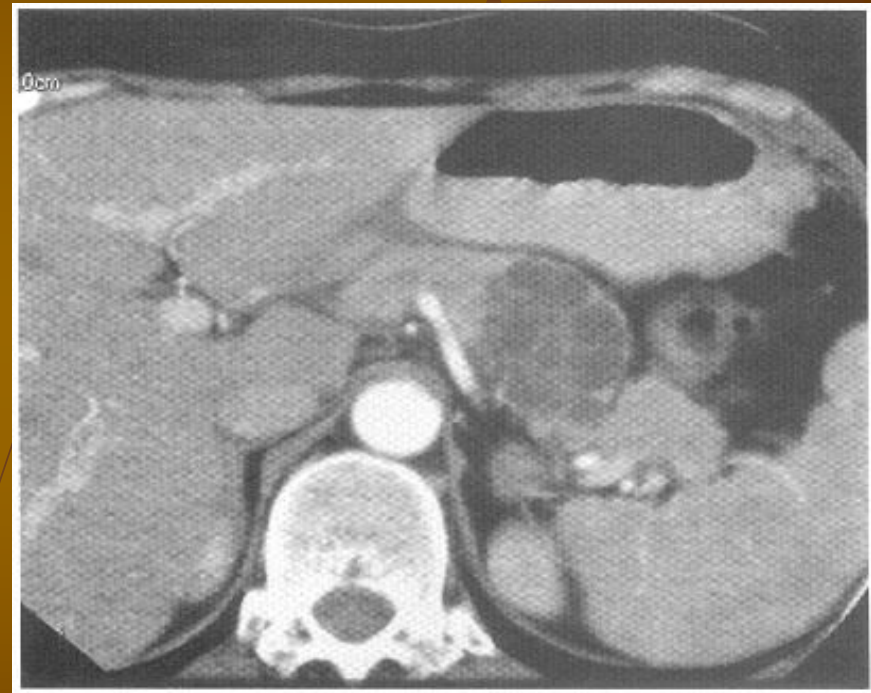
Cystic masses

- Serous cystic tumours are generally benign. CT can often differentiate between serous and mucinous tumours. Serous cystadenomas are usually composed of numerous tiny cysts, generally more than six in number and less than 20 mm in diameter, which may have a central scar or central stellate calcification



Cystic masses

- **Benign serous cystadenoma**
- The tumor at the junction of the pancreatic body and tail shows the typical appearance of numerous small cysts



Cystic masses

- **Mucinous cystadenocarcinoma**
a
- A cystic mass replacing most of the body and tail
- Calcifications are noted within the wall and small papillary excrescences and septi are also seen



A

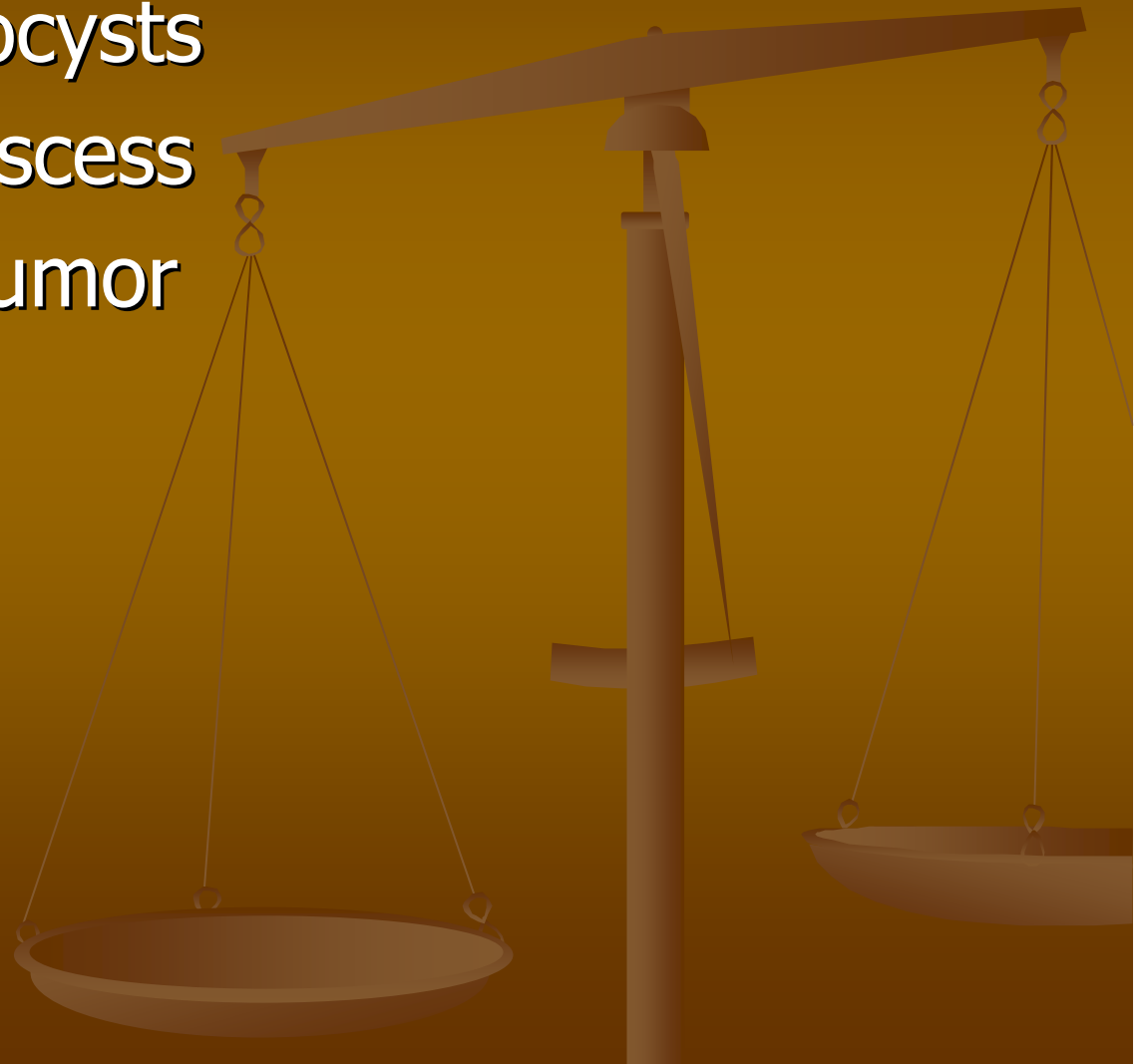


B

Impression

Pancreatic pseudocysts

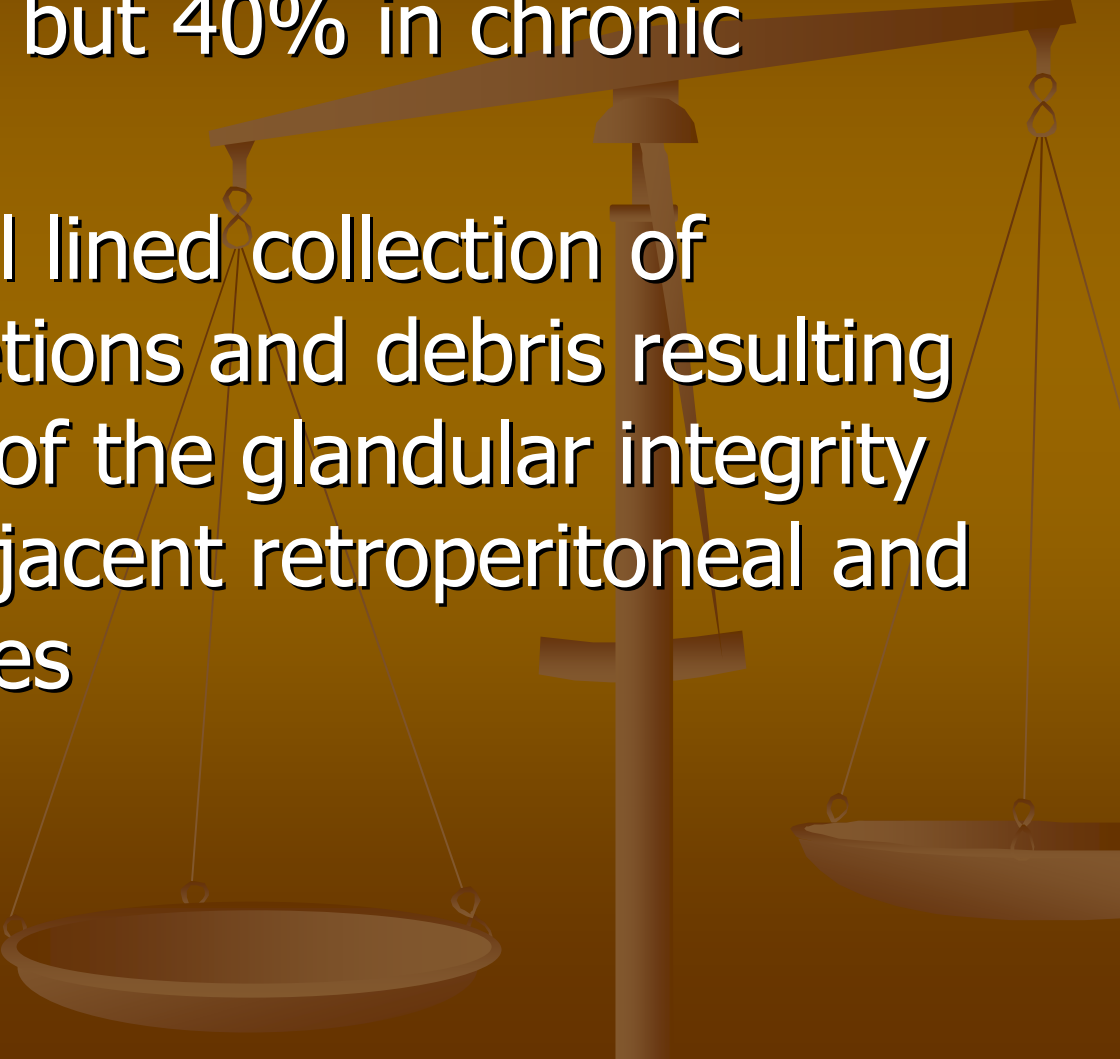
- r/o pancreas abscess
- r/o pancreatic tumor



Treatment

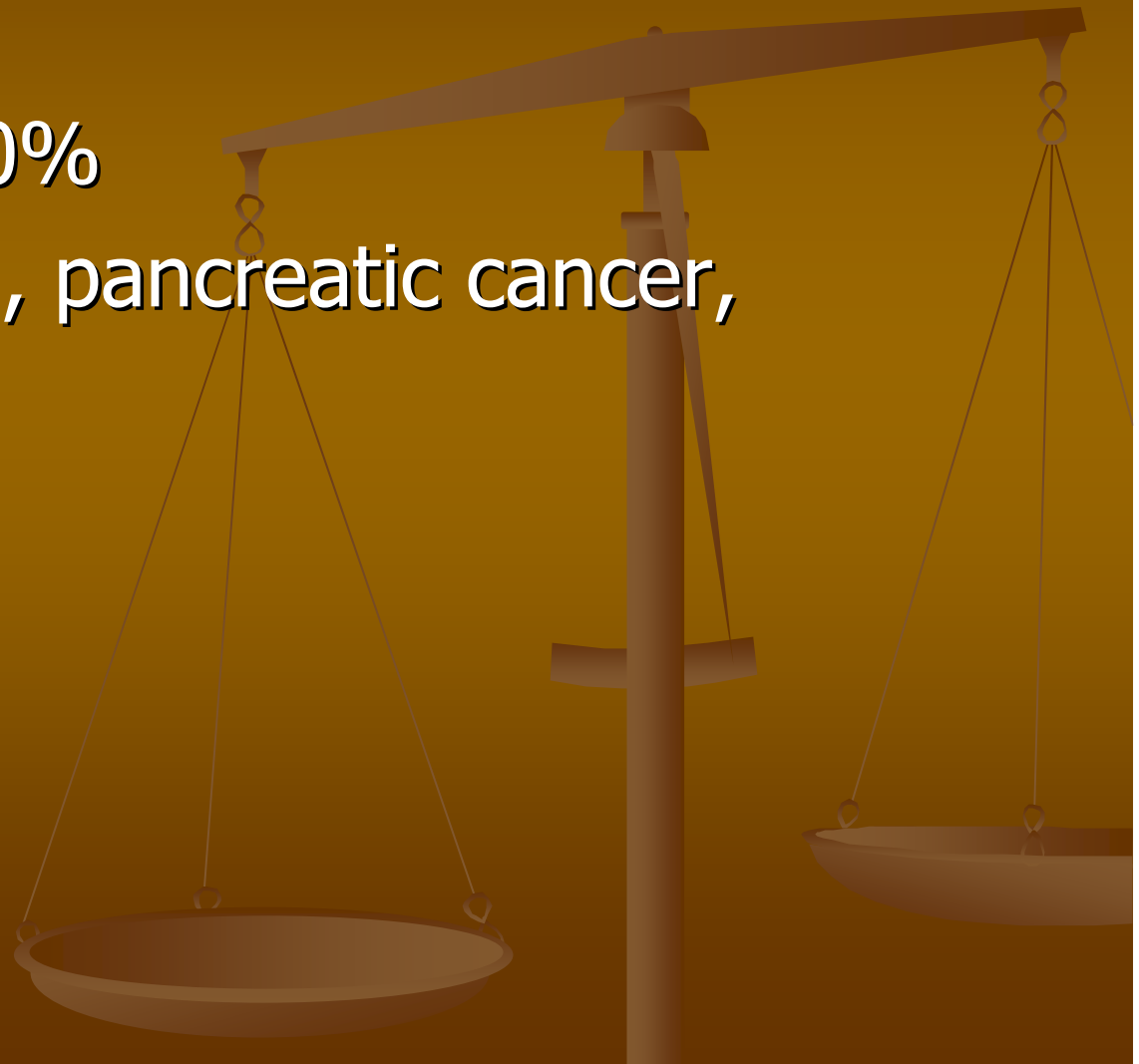
- Operation method : pancreatic cystojejunostomy (Roux-en-Y)
- Operation found : 12*8*9 cm cyst in pancreatic tail ; 1000ml yellowish pus+cell debris ; thickened cystic wall
- Pathology : pancreas, distal, open cystomy
---granulation tissue→ pseudocyst

Pancreatic Pseudocyst - Etiology

- © <10% in acute but 40% in chronic pancreatitis
 - © A non-epithelial lined collection of pancreatic secretions and debris resulting from disruption of the glandular integrity walled off by adjacent retroperitoneal and visceral structures
- 

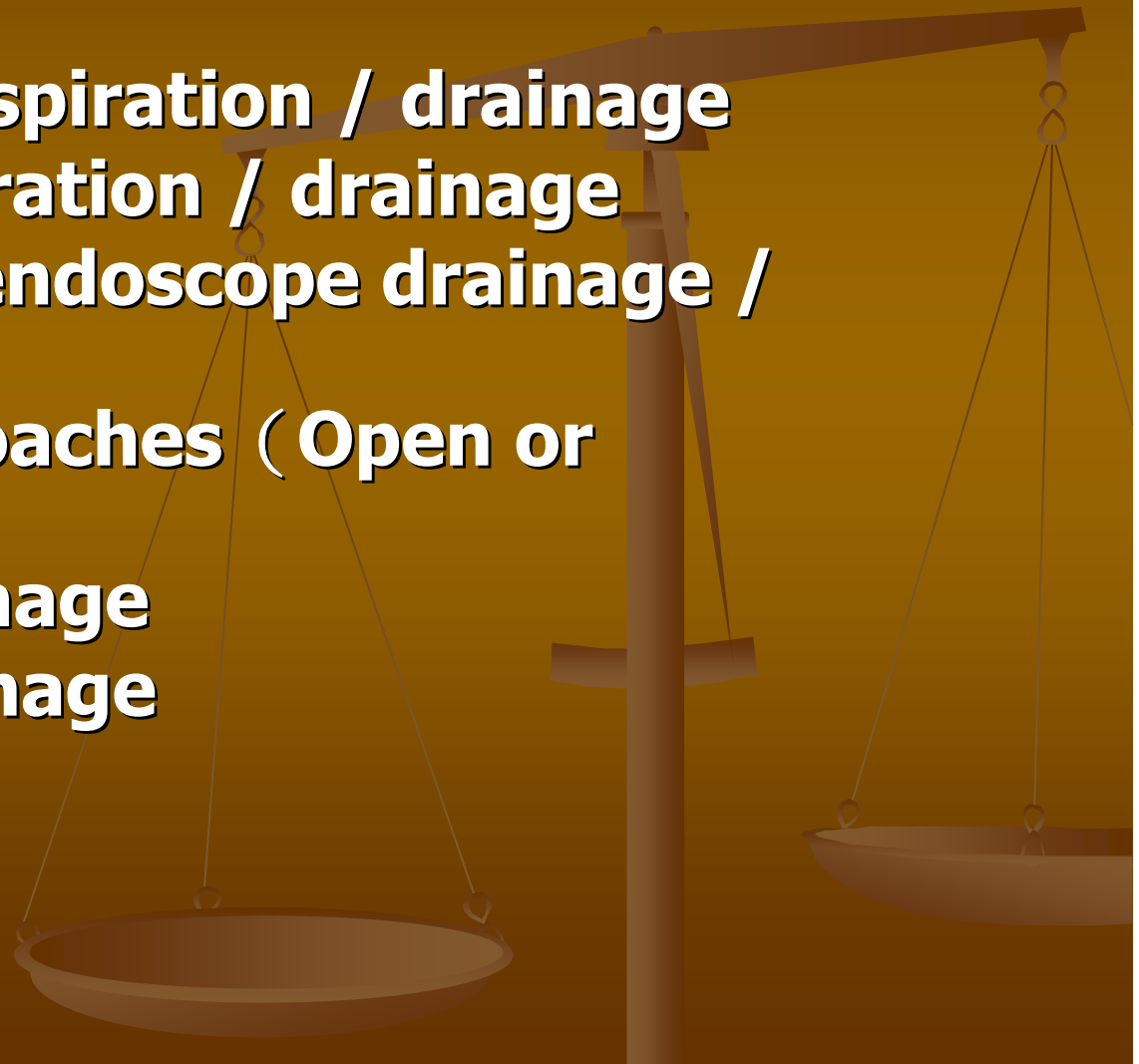
Pancreatic Pseudocyst - Etiology

- © Alcoholic 75%
- © Traumatic 5-10%
- © Hyperlipidemia, pancreatic cancer,
operative injury



Management options for pancreatic pseudocysts

- **Observation**
- **Percutaneous aspiration / drainage**
- **Endoscope aspiration / drainage**
- **Transpapillary endoscope drainage / stenting**
- **Operative approaches (Open or laparoscopic)**
 - Internal drainage**
 - External drainage**
 - Resection**



Management options for pancreatic pseudocysts

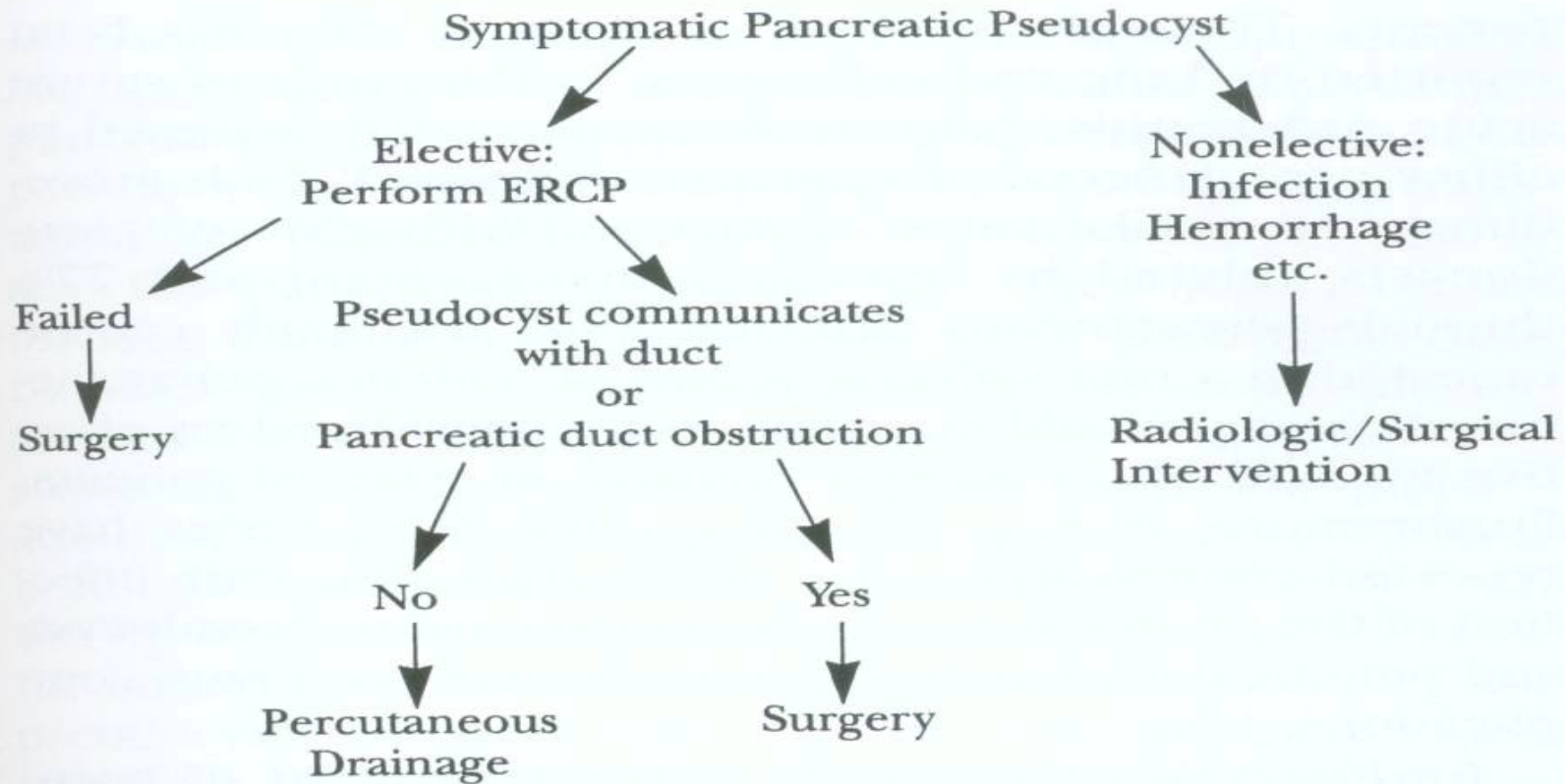


Figure 4-4. Treatment algorithm retrospectively applied to patients with pancreatic pseudocysts. (From Ahearne, P.M., Baillie, J.M., Cotton, P.B., et al.: An endoscopic retrograde cholangiopancreatography [ERCP]-based algorithm for the management of pancreatic pseudocysts. *Am. J. Surg.*, 163:111, 1992, with permission.)

Typical Image

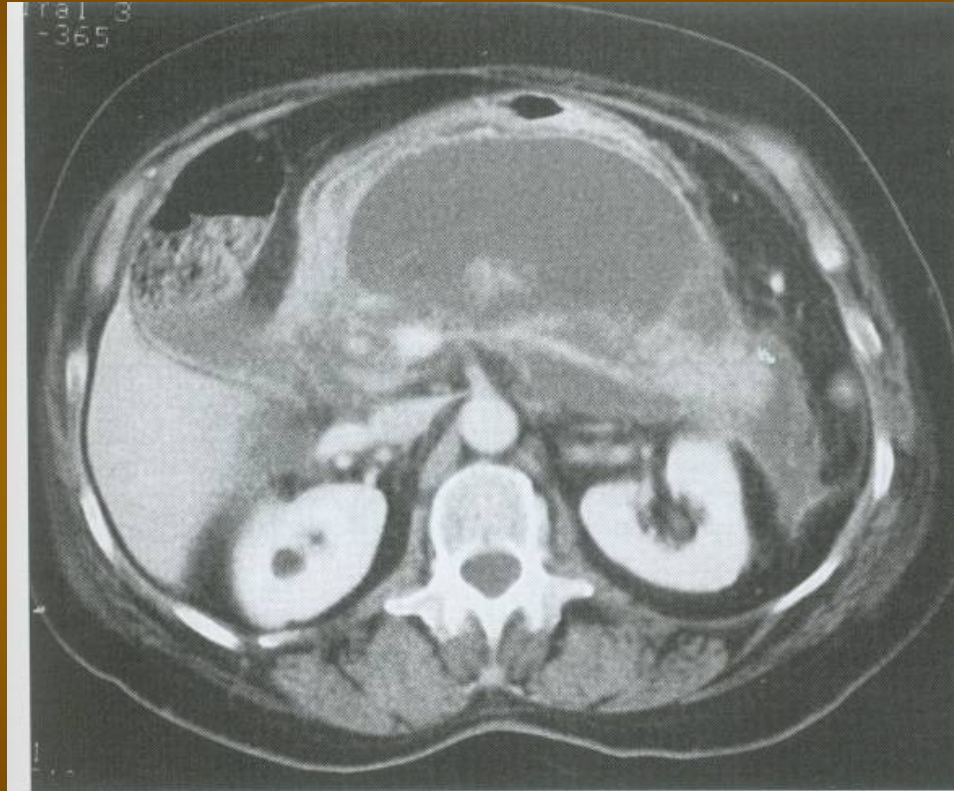


Figure 4-2. A computed tomography scan of a patient with a large retrogastric pancreatic pseudocyst. The patient had symptoms of abdominal pain, back pain, nausea, and early satiety.

Typical Image

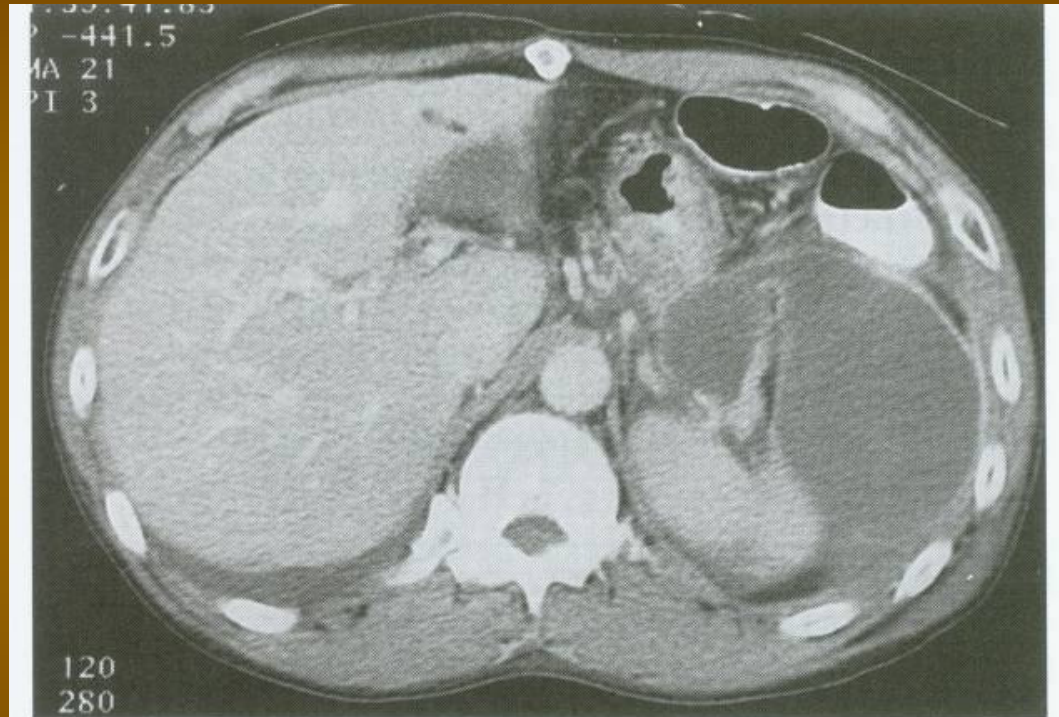


Figure 4-3. A computed tomography scan of a patient with an acute fluid collection 10 days after an episode of acute alcoholic pancreatitis. The collection is located anterior to the spleen and appears to have a thin wall. The acute fluid collection was not causing symptoms and gradually resolved with observation.

Pancreatic Pseudocyst - Surgical management

- Cystogastrostomy
- Roux-en-Y cystojejunostomy
- Cystoduodenostomy
- Excision with or without pancreatic resection

