Chronic and Acute Cholecystitis

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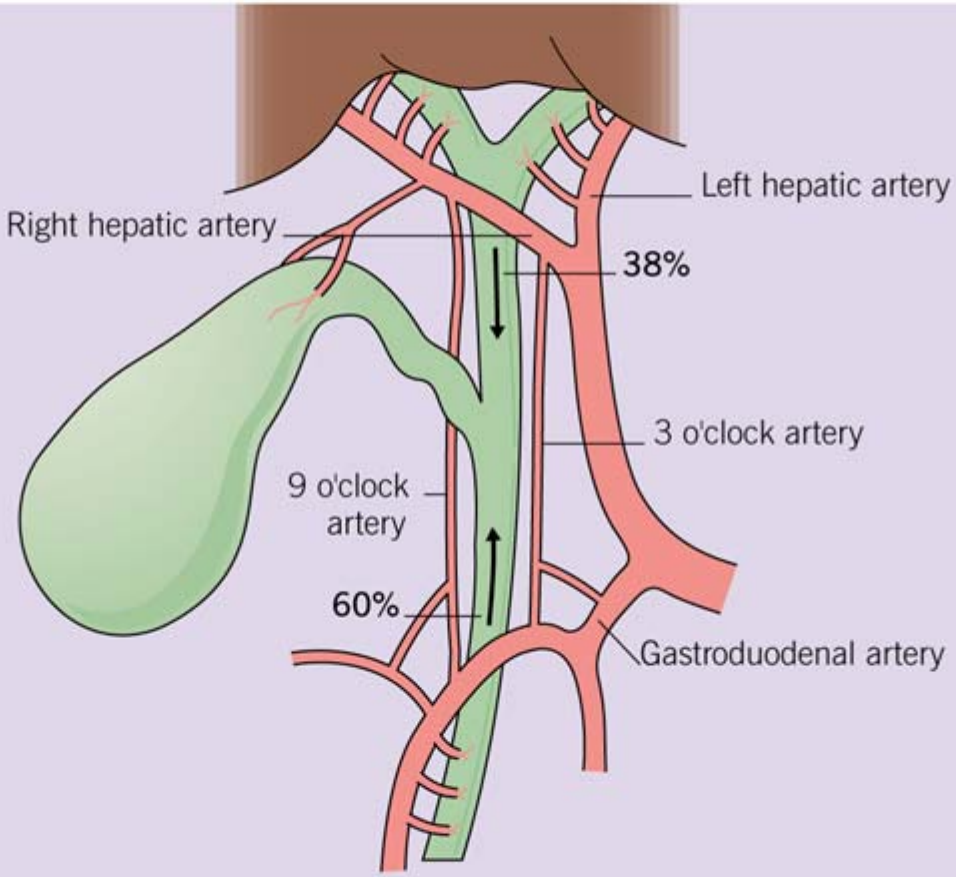
BLOOD SUPPLY TO EXTRAHEPATIC BILIARY TREE



CHRONIC CHOLECYSTITIS

- Most common form of symptomatic gallbladder disease and is associated with gallstones in nearly every case
- Cholecytitis is applied whenever gallstones are present regardless of the histologic appearance of the gallbaldder
- Repeated minor episodes of obstruction :

  *Intermittent biliary colic

  *Inflammation and subsequent scar formation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Gallbladders from symptomatik patients who have never had an attack of acute C are two types:

*Mucosa may be slightly flattened,but the wall is thin and unscarred and,except for the stones ,appears normal

*Others exhibit obvious signs of chronic inflammation (thickening,cellular infiltration,loss of elasticity,fibrosis)

Symptoms and Signs

*Biliary pain

-begins abruptly and subsides gradually

-lasting for a few minutes to several hours

-not intermittent

-may be postprandially

-nausea and vomiting may accompany the pain

-in the right upper quadrant,(epigastric or left upper quadrant,precordial pain)

-radiation(around the costal margin into the back,region of scapula)

-changing position

Symptoms and signs(conti..)

- Tenderness
- Palpable (rarely)
- Fatty intolerance,dyspepsia,indigestion, heartburn,eructations

Imaging

*US

*Oral Cholecystogram if;

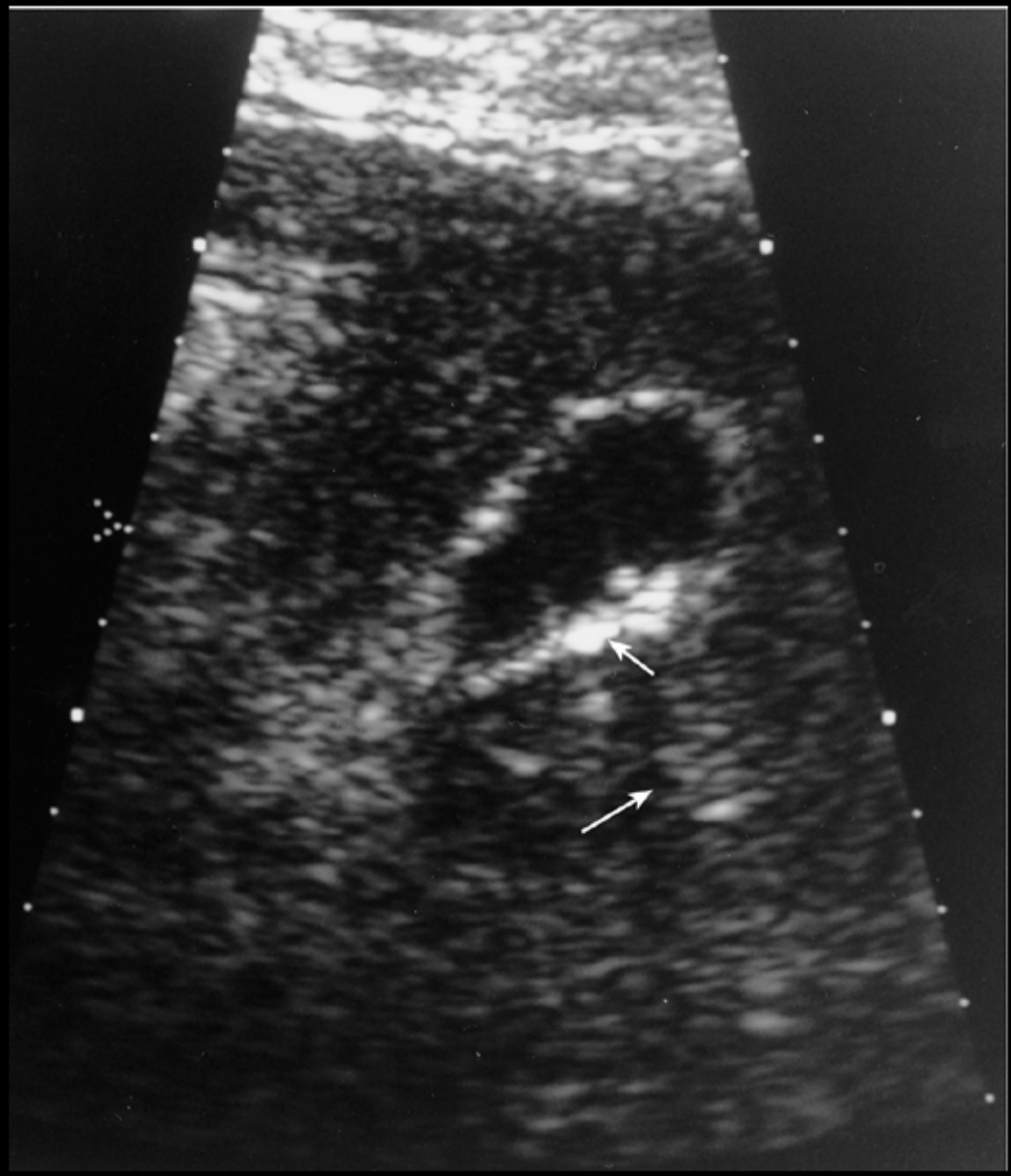
-us is equivocal

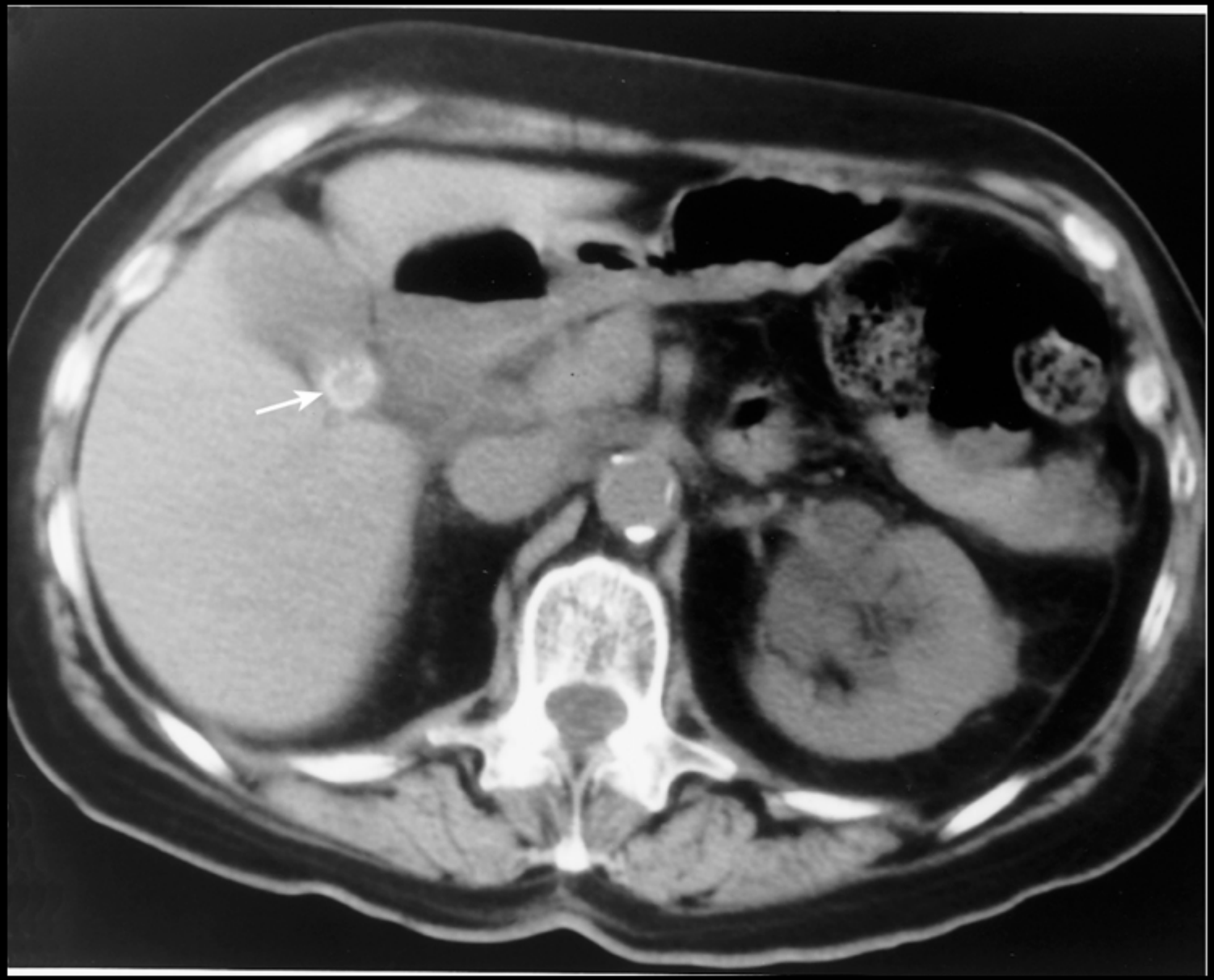
-the patient is candidate for lithotripsy or ursodiol therapy

-US normal but symptoms are highly suggestive

*ERCP(us and oc are negative)

*CT





DIFFERANTIAL DIAGNOSIS

- HIATAL HERNIA
- DU
- PANCREATITIS
- MI
- IRRITABLE COLON
- CARCINOMA OF THE CECUM AND ASCENDING COLON

COMPLICATIONS

- ACUTE CHOLE CYTITIS
- COMMON DUCT STONES
- ADENOCARCINOMA OF THE GALLBALDDER
- ACUTE PANCREATITIS
- CHOLANGITIS

MEDICAL TREATMENT

*DISSOLUTION(ursodiol):reduces cholesterol saturation

-gallstones must be small (<5 mm)

-devoid of calcium(nonopaque)

-gallbladder must opacify on OC

-15% of patients are candidates for treatment

-d is achieved within 2 years in about 50% of highly selective patients

-recurrence in 50% of cases within 5 years

LITHOTRIPSY AND DISSOLUTION

- Extracorporeal shock wave lithotripsy: involves focusing shock waves upon the gallstones
- The stones are fragmented by explosion
- Candidates for lithotripsy must also use ursodiol therapy
- Complete elimination of gallbladder stones

  within 9 months is in about 25% patients

SURGICAL TREATMENT

CHOLECYSTECTOMY IS INDICATED
IN MOST PATIENTS WITH SYMPTOMS

PROGNOSIS

The operative death rate is about 0.1 % in patients(<50),and about 0.5% (>50)

The operation relieves symptoms in 95% of cases

ACUTE CHOLECYSTITIS

- In 80 %of cases AC results from obstruction of cystic duct
- The GB becomes inflamed and distended

  (Pain and Tenderness)

AC ….

- Most attacks resolve spontaneously without surgery or other specific therapy
- Some develop complications

AC(Pathology)

- Subserosal edema , hemorrhage and patchy mucosal necrosis
- Later PMNs appear
- Final stage is development of fibrosis
- Gangrene and perforation may occur as early as 3 days after onset
- Most perforations occur during the second week

AC(Causes)

-Obstruction

-Trauma from gallstones→Phospholipase→

This is followed by conversion of lecithins in bile to lysolecithin (Toxic compound)→

More inflammation

-Bacteria

AC …

*Acalculous cholecystitis(20%)

-Malignant tumors

-Cystic artery occlusion

-Primary bacterial infections(E.coli,clostridia, Salmonelle typhi)

-In hospitalized patients due to other illness

-In trauma victims

-TPN

AAC…

Small vessels occlusion occurs early →progresses rapidly to gangrenous cholecystitis→septic complications (mortality rate is high)

SYMPTOMS AND SIGNS

- Abdominla pain
- In 75% of cases have had previous attacks of biliary colic
- Abdominal tenderness
- Nausea and vomiting (50%)
- Mild jaundice(10%)
- Fever and chills(38-38.5)

SYMPTOMS AND SIGNS

- Tenderness
- Palpable GB (33%)
- Voluntary guarding
- Murphy`s sign

LABORATORY FINDING

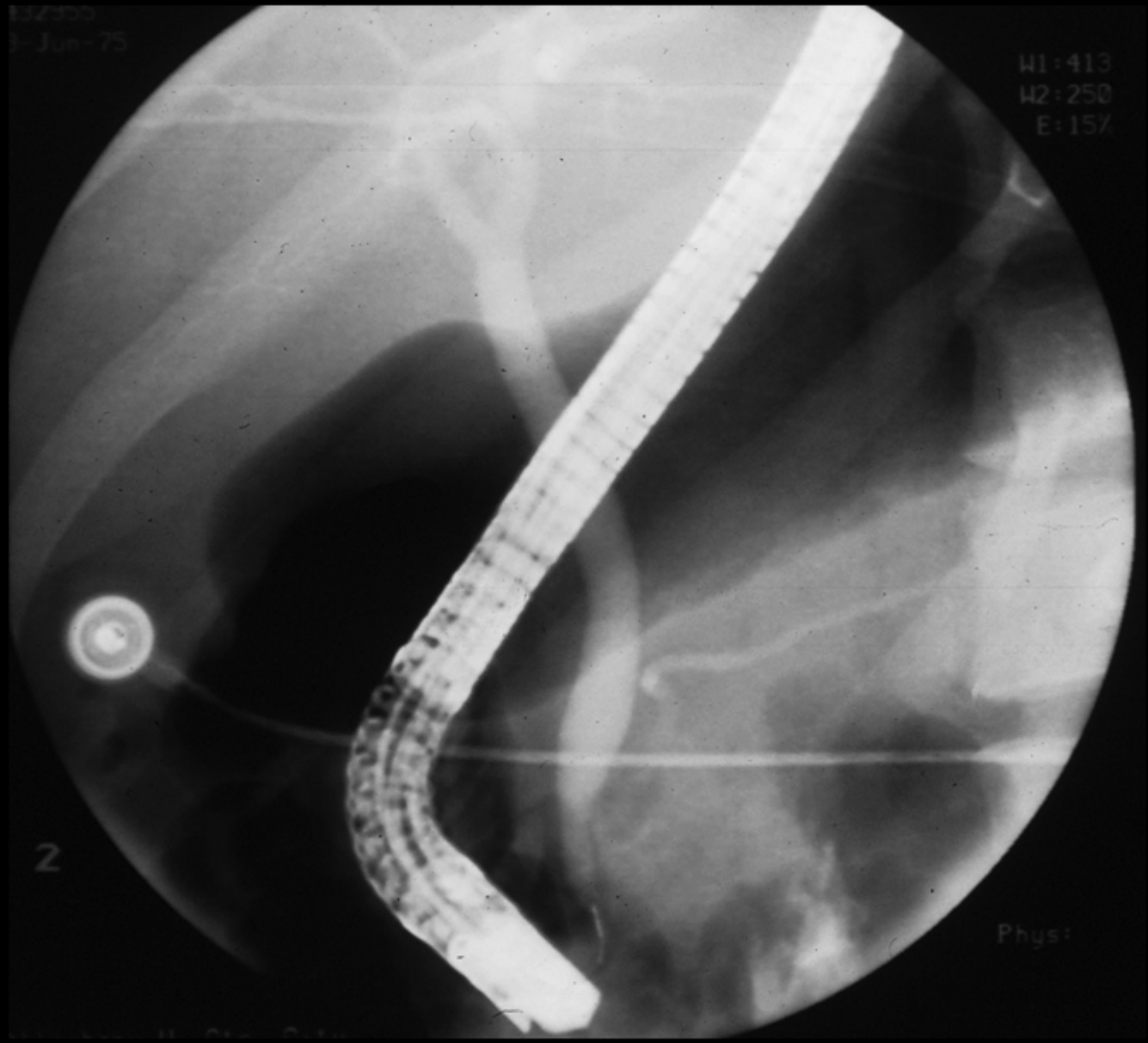
- WBC:12.000-15.000
- Mild elevation of serum bilirubin:2-4 mg/dl
- A mild increase in alkaline phosphatase
- Serum amilase concentration transiently reaches 1000 units/dl

IMAGING

* A plain x-ray of the abdomen:

-Enlarged GB shadow

-In 15% of patients gallstones can be seen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Phys:

Ultrasound scans

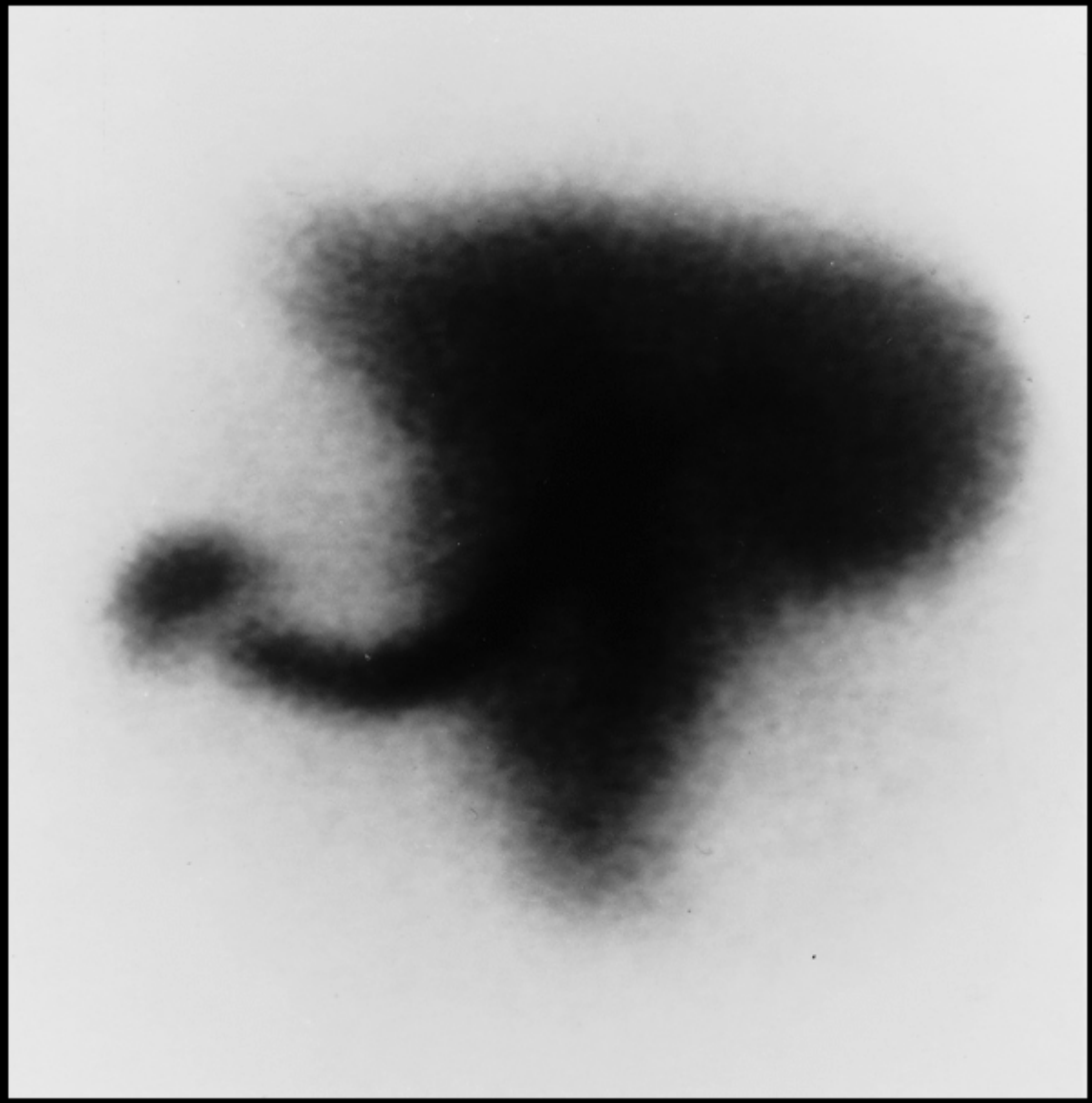
*Usually US is the only test need to make the diagnosis of AC

- Gallstones
- Sludge
- Thickening of the gallbladder
- Ultrasonographic Murphy`s sign

Radionuclide excretion scan(HIDA)

*It can not demonstrate gallstones

*If the GB is imagined ,AC is ruled out



Differantial Diagnosis

- Peptic Ulcer
- Acute Pancreatitis
- Acute Appendicitis
- Fitz-Hugh-Curtis Syndrome

Complications

*Empyema(suppurative cholengitis)

-Frank pus

-More toxic

-Spiking fever(39-40 C)

-Chills

-WBC:>15.000

Complications…

*Perforation

The total incidence ofperforation is 10%

1.Localized perforation with pericholecystic abscess

2.Free perforation with generalized peritonitis

3.Perforation into an adjacent hollow viscus,with the formation of fistula

1-Pericholecystic abscess

-Most common

-Palpable mass

-The patient often becomes toxic(39 C,WBC>15000)

2-Free perforation

-(1-2%)

-Early in the disease when gangrene devolops before adhesions wall off the gallbladder

-Emergency laparatomy

- THE EARLIER OPERATION IS PERFORMED,THE BETTER THE PROGNOSIS

3-Cholecystoenteric fistula

-(Stomach,duodenum,colon)

-Upper GIS series

-Malabsorbtion and steatorrhea

-Cholecystectomy and closure of the fistula

MEDICAL TREATMENT

- IV fluids
- Nasogasric tube
- Parenteral cefazolin(2-4g daily)

  Clindamycin

  Aminoglycoside

-Single-drug therapy using imipenem is a good alternative

Surgical therapy

1-The incidence of technical complications is no greater with early surgery

2-ES reduces the total duration of illness and medical costs

3-The death rate slightly lower with ES

*About 10 % of patients require emergency surgery

-Complication

-High fever

-Marked leucocytosis

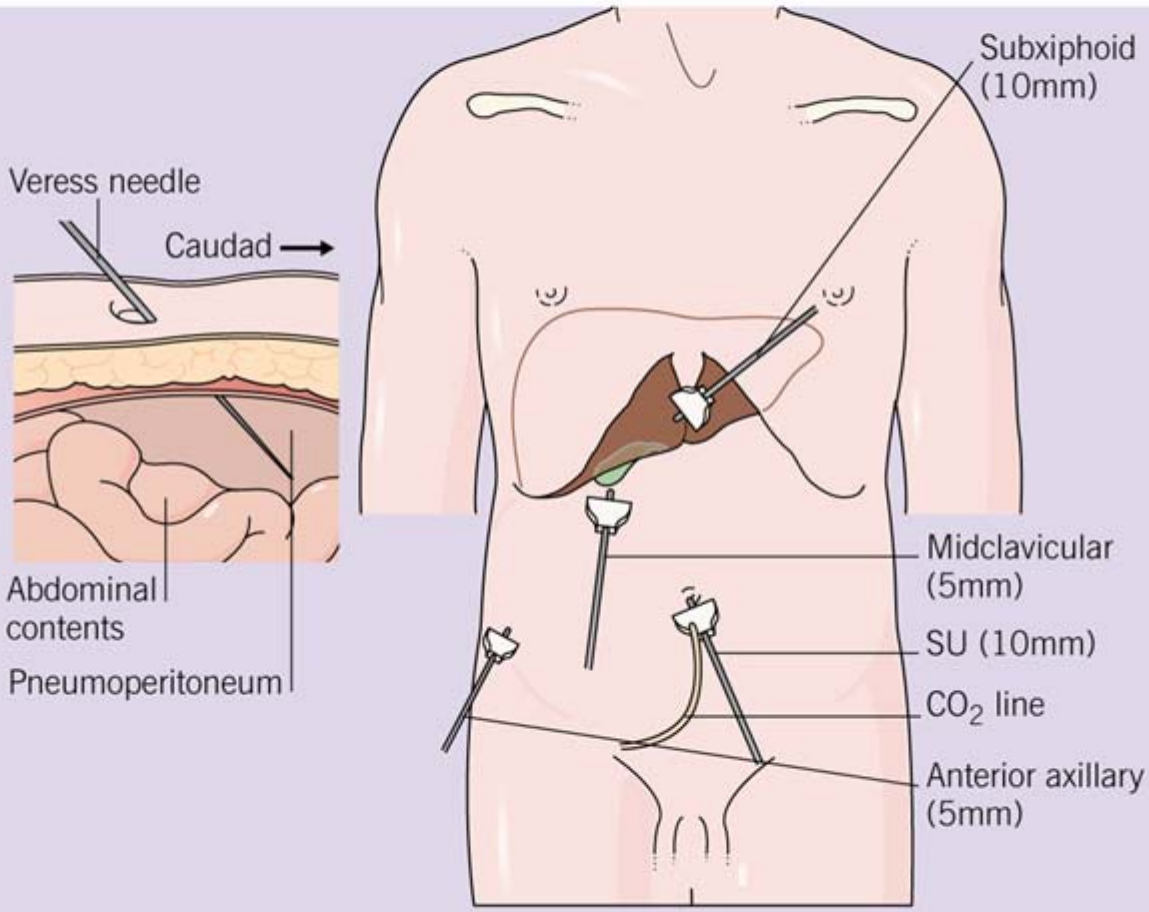
-chills

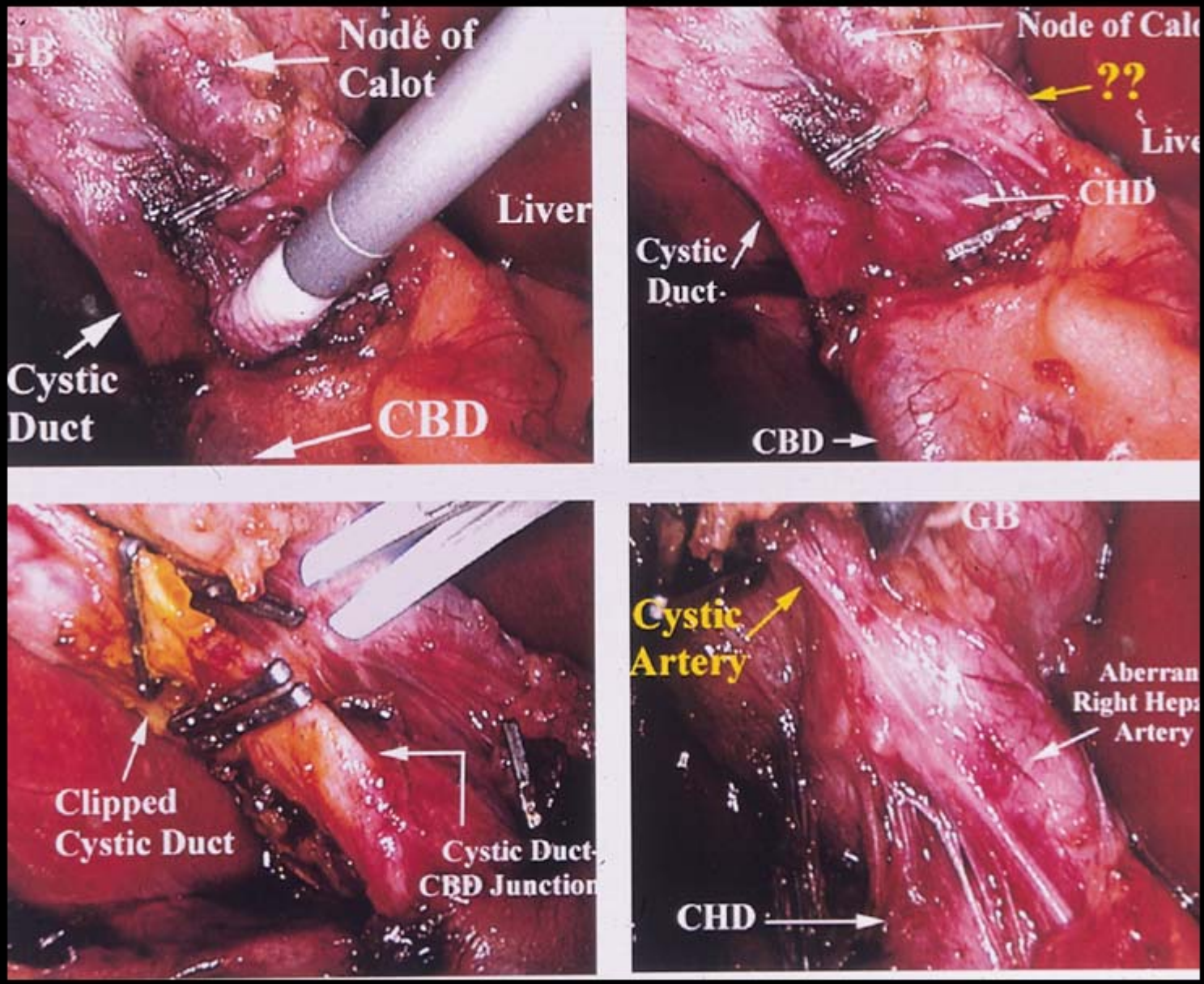
-Acalculous cholecystitis

When the patient`s general condition is poor,percutanous catheter cholecystestomy is the treatment of choice

Operative cholangiography should be performed in most cases

LAPAROSCOPIC CHOLECYSTECTOMY: POSITION OF TROCARS

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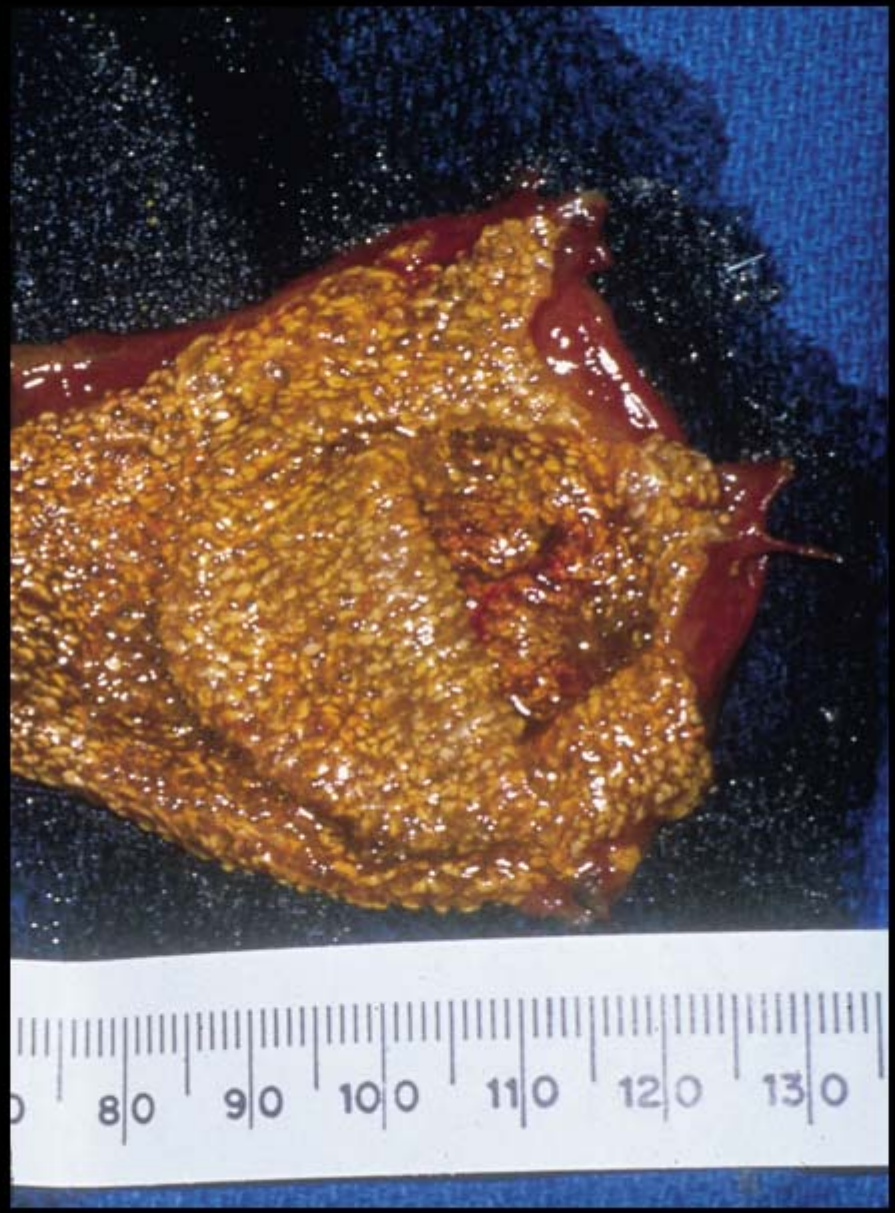
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