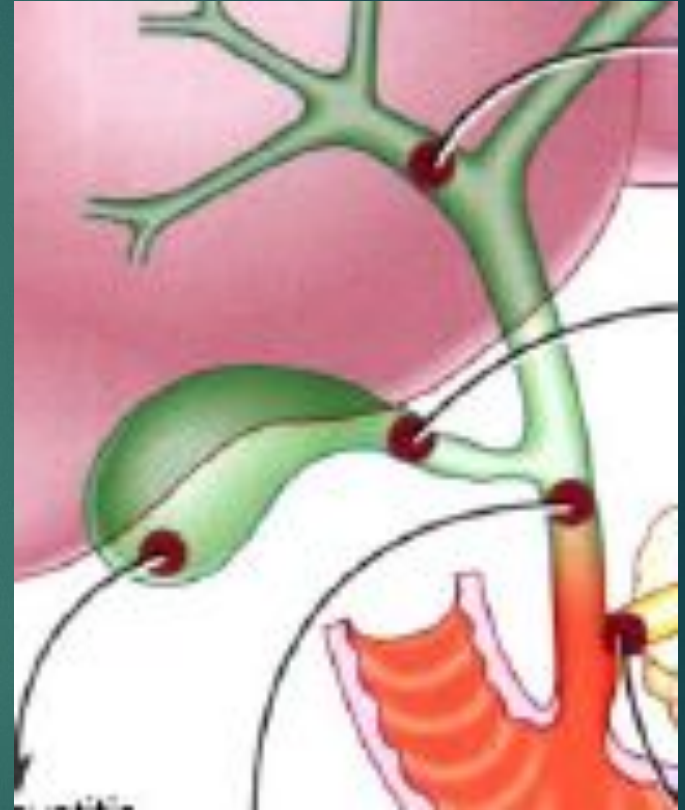


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CHRONIC CHOLE-C YSTITIS

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PLAN

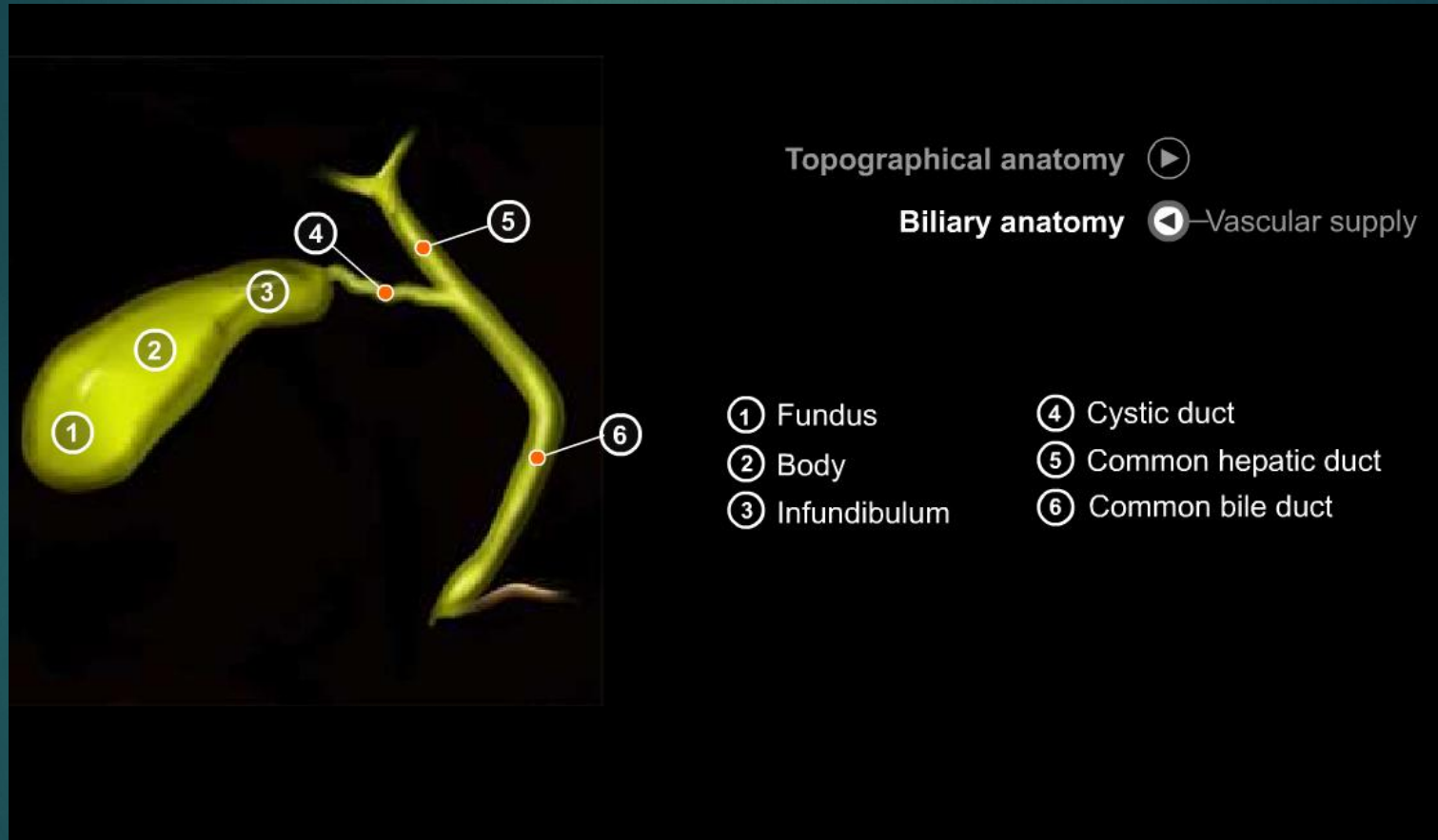
CHRONIC CHOLECYSTITIS

- 1. Etiology and pathogenesis**
- 2. Classification**
- 3. Clinical picture**
- 4. Diagnosis**
- 5. Differential diagnosis**
- 6. Treatment**

CHRONIC CHOLECYSTITIS

- ▶ is chronic inflammation of gall-bladder.

BILIARY ANATOMY



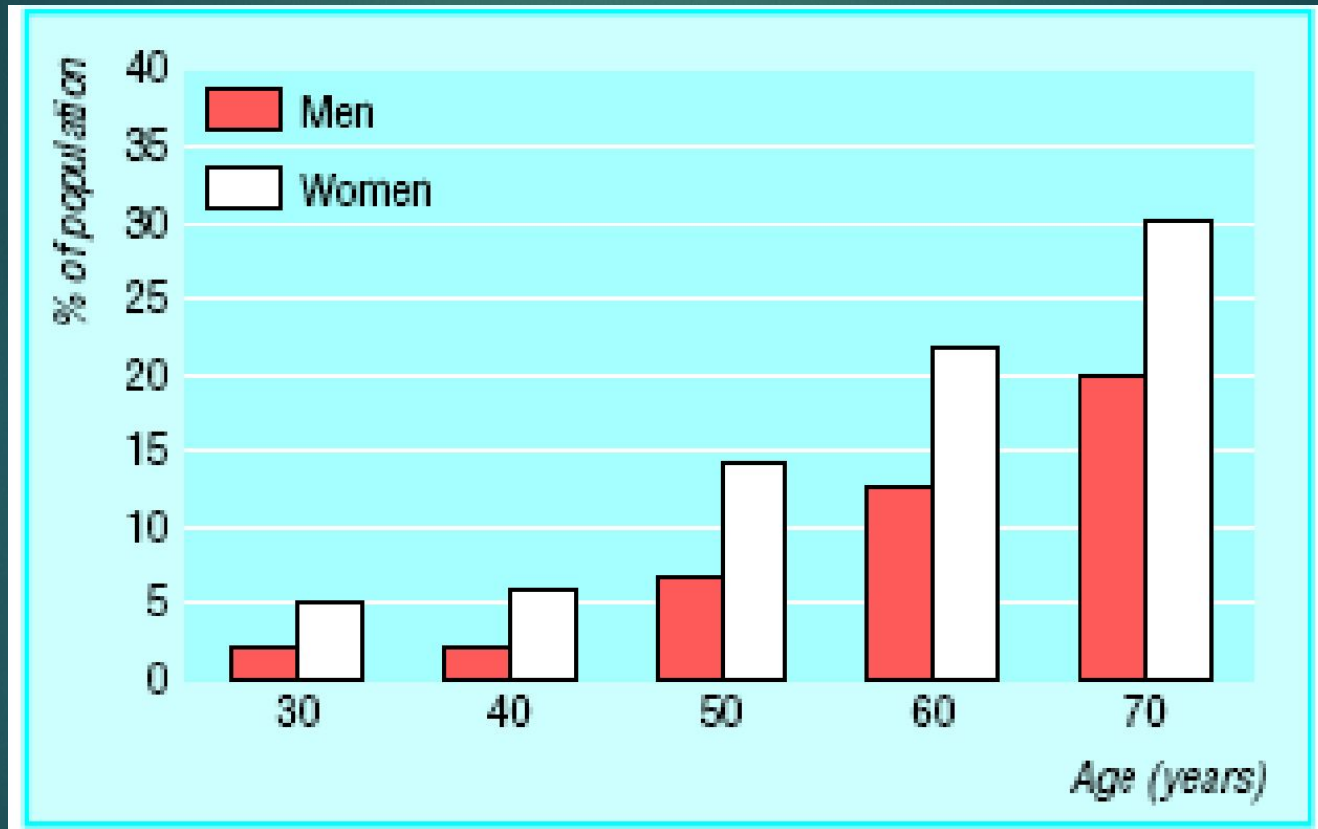
Conditions resulting from gallstones

	Chronic cholecystitis	Acute cholecystitis	Choledocholithiasis	Cholangitis
Clinical picture	Poorly localised pain Remits spontaneously in hours Local tenderness Apyrexial	Severe RUQ pain Severe tenderness Pyrexia	Intermittent jaundice Intermittent colic Pyrexia suggests cholangitis	Rigors RUQ pain Pyrexia
Laboratory findings	Usually normal	Leucocytosis Mild AP elevation	Elevated AP & bilirubin	Elevated AP & bilirubin
Diagnostic test	Ultrasonography Oral cholecystography	Ultrasonography	ERCP Ultrasonography	ERCP Ultrasonography
AP = alkaline phosphatase; RUQ = right upper quadrant				

Types of gallstones

Stone type	Predisposing factors
Cholesterol	Obesity, diabetes mellitus, multiparity, terminal ileal disease, hyperlipidaemia, oestrogens oral contraceptive pill, total parenteral nutrition
Black/pigment	Haemolysis, cirrhosis

Prevalence of gall stones according to age



Gall stones vary from pure cholesterol (white), through mixed, to bile salt predominant (black).



Etiology and Risk Factors

- ▶ **Acute or chronic infection**
 - *Escherichia coli* (35-40%),
 - *Staphylococcus* (15%),
 - *Enterococcus* (15 %),
 - *Streptococcus* (10%)

Mixed microflora – 30%
- **hematogenic way**
- **lymphogenic way**
- **contact way**

Etiology and Risk Factors

- ▶ Discoordination of bile passage (hypotonic biliary dyskinesia), bile congestion
- ▶ Congenital defect of gall-bladder
- ▶ Metabolic disturbance
- ▶ Discoordination of neurohumoral regulation biliary system, stress
- ▶ Allergy
- ▶ ↓ Immune reactivity
- ▶ Alimentary disorders

CLASSIFICATION

- ▶ - Chronic calculous cholecystitis
- ▶ - Chronic non-calculous cholecystitis

CLASSIFICATION

- ▶ I. **Phase of disease:**
 - ▶ Acute
 - ▶ Uncomplete remission
 - ▶ Remission
- ▶ II. **Severity of disease:** mild, moderate, severe.
- ▶ III. **Course of disease:** recurrent, permanent.
- ▶ IV. **Type of dyskinesia:** hypertonic, hypotonic.

CLASSIFICATION

- ▶ V. Uncomplicated

- ▶ Complicated:

 - Pancreatitis,*

 - Nonspecific Reactive Hepatitis,*

 - Pericholecystitis,*

 - Cholangitis** (Patients present with biliary pain, jaundice, fever and often rigors. The septicaemia is usually due to Gram-negative organisms, is frequently severe and may be lifethreatening).

-Hydropsy (mucocele) of gall-bladder is its aseptic inflammation, that arises up as a result of blockade of cystic duct by concrement or mucus. During palpation increased and unpainfully gall-bladder is marked in patients.

-Empyema of gall-bladder is unliquidated in time hydropsy, that at repeated infection is transformed in a new form. Gall-bladder in such patients is palpated as a dense, moderately painful formation, however, the symptoms of irritation of peritoneum, as a rule, are absent. The high temperature of body is periodically observed. In blood high leucocytosis with the shift of formula of blood to the left is present.

Example of diagnosis

- ▶ Chronic non-calculous recurrent cholecystitis, acute phase, moderate severity.
Hypotonic biliary dyskinesia.

Symptoms and clinical signs

- ▶ ***Pain syndrome.***

(-Pain in right hypochondrium and epigastric area with an irradiation in right supraclavicular area and right shoulder.

-If pain syndrome has the strongly expressed character, it is called hepatic colic).

- ▶ ***Dyspeptic syndrome.***

- ▶ ***Asthenic syndrome.***

- ▶ ***Intoxication syndrome.***

Symptoms and clinical signs

- ▶ **Kehr's** symptom
- ▶ **Murphy's** symptom
- ▶ **Ortner's** symptom

DIAGNOSTIC PROGRAM

- ▶ Total blood count
- ▶ Biochemical analysis (*Glucose, Bilirubin, ALT, AST, GGT, Alkaline phosphatase, Proteins, Amylase, Lipids, Cholesterol, Liver tests, Sodium, Potassium, Urea, Creatinine*)
- ▶ Urinalysis, Diastase of urine
- ▶ Coagulogram
- ▶ Duodenal tubage and Examination of bile (*chemical, bacteriological*)
- ▶ Examination of feces, Coprogram
- ▶ ECG
- ▶ Endoscopy
- ▶ USD
- ▶ Cholecystography

Ultrasound showing normal gallbladder

- ▶ **Ultrasonography** is the important procedure for the diagnosis of chronic gallbladder disease.
- ▶ In 90% to 95% of cases of cholelithiasis, ultrasonography demonstrates the echo of the calculus and the acoustic shadow behind the calculus.



Ultrasound showing chronic cholecystitis



Stone in the gallbladder

- ▶ Ultrasound of the gallbladder showing, in the center of the image, a stone within the gallbladder with a triangular area of acoustic attenuation (“shadowing”) behind the gallstone



- ▶ Ultrasound image of gall bladder with dark area (a) representing gall bladder and multiple white echoes (b) representing stones.



- ▶ Bottom: The gall bladder after cholecystectomy with multiple small stones

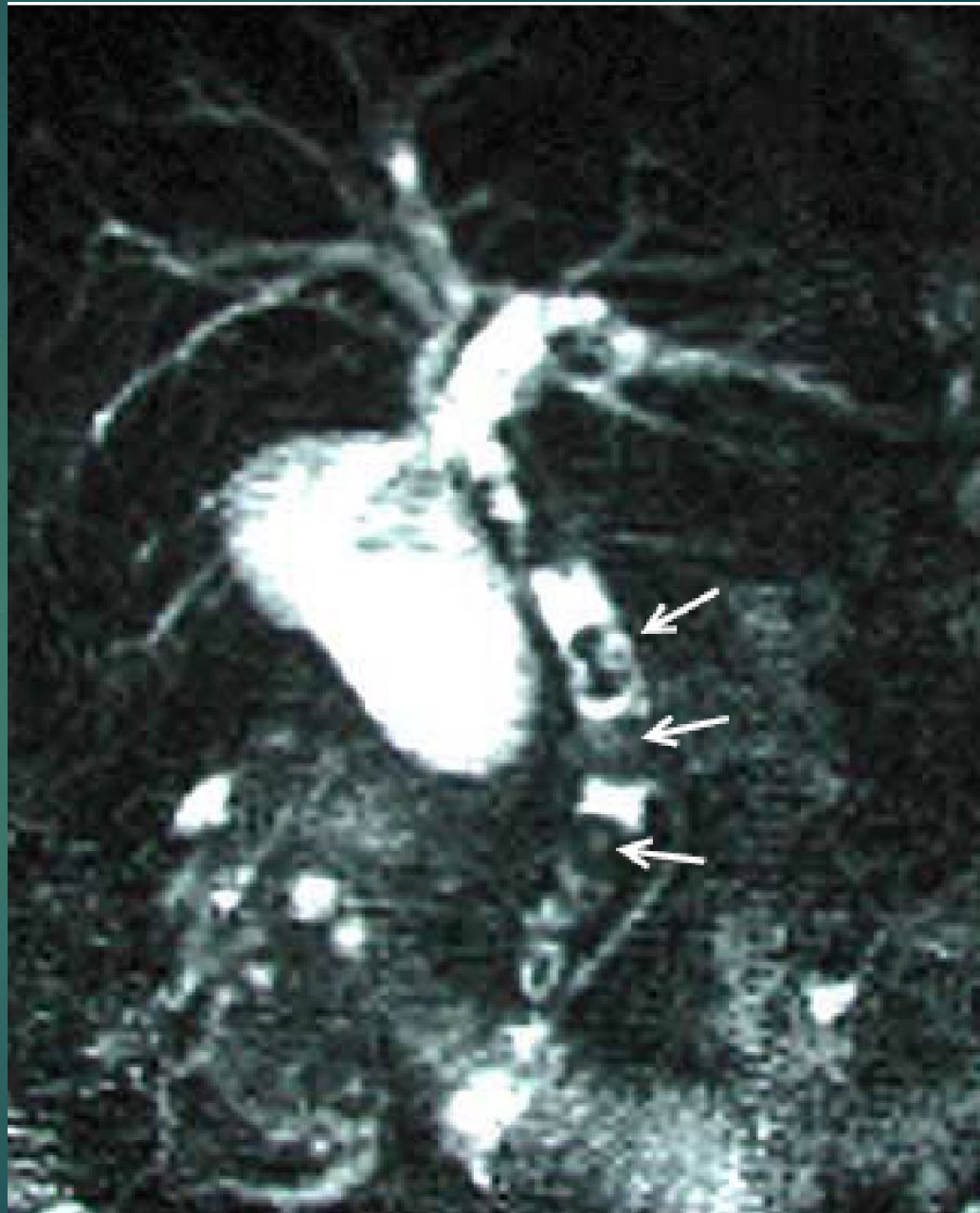


Cholecysto-
graphy.

Cholelithiasis



- ▶ This magnetic resonance cholangiopancreatography shows multiple gallstones (arrows) in the common bile duct (choledocholithiasis)



Differential diagnosis

- ▶ Peptic ulcer disease
- ▶ Chronic pancreatitis
- ▶ Chronic hepatitis
- ▶ Tumors (liver, gall bladder)
- ▶ Pleurisy (right-sided)
- ▶ Subdiaphragmatic abscess

TREATMENT

- ▶ Acute cholecystitis requires analgesia, intravenous support and antibiotics, and usually settles with these measures.
- ▶ Subsequent cholecystectomy may then be performed when the acute episode has resolved.
- ▶ Careful selection of patients with chronic cholecystitis is important as not all patients are pain-free when the gallbladder is removed; symptoms may abate spontaneously and not recur; and there is an increasing, associated, operative mortality with advancing age.
- ▶ Laparoscopic cholecystectomy has increased the acceptability of the procedure for patients and has consequently become widely available.

TREATMENT

- 1. Bed rest.
- 2. Hunger (1–3 days), then diet № 5.
- 3. Desintoxication therapy.
- 4. Spasmolytics, Analgetics (Spasmalgon 5 ml, No-shpa 2% 2 ml, Papaverin 2% 2 ml, Platyphyllin 0,1% 1 ml, Baralgin 5 ml, Analgin 50% 2 ml).
- 5. Antibacterial therapy (Ampiox, Ofloxacin, Cephalosporines, Furasolidon)

CHOLANGITIS

- ▶ Acute cholangitis is a serious infection which may be life-threatening.
- ▶ Antibiotics such as third generation cephalosporins or amino-quinolones should be used.
- ▶ Careful attention should be paid to fluid balance, urine output and renal function.

Medical management of gallbladder stones

- ▶ Dissolution therapy can be considered in patients with uncomplicated gallstone disease who are unwilling or unfit for surgery.
- ▶ The prerequisites for treatment are that the stones should be non-calcified, the gallbladder should be functioning and the cystic duct not obstructed.
- ▶ The bile acids, chenodeoxycholic acid and ursodeoxycholic acid are available and need to be given for long periods to be successful.
- ▶ They have no effect on pigment stones.

Indications for Surgical Treatment

- ▶ All forms of acute calculous cholecystitis
- ▶ Destructive and complicated forms of noncalculous cholecystitis
- ▶ Acute catarrhal cholecystitis, conservative treatment of which was ineffective