

Cholelithiasis

Cholelithiasis is the most common biliary tract disease and one of the most common surgical indications. According to autopsy findings, up to 20–30% of the population is affected by cholelithiasis. It occurs four times more often in women, and it is more common in obese, diabetics and patients with prehepatic (hemolytic) jaundice. right|350px

Pathogenesis

Cholelithiasis can be primary or more often secondary – a stone travels from the gallbladder to the bile duct. Stones are formed when there is a disproportion between the concentrations of the basic components of bile (cholesterol, bile acid salts and phospholipids).

Composition of stones:

- bilirubin, bile acids, calcium.

Division:

- **according to the predominant component**,
 - **cholesterol** – - solitary, spherical, in cross section crystals of cholesterol are arranged the radiallyl . They are formed when there is an increased concentration of cholesterol in the bile (cause – high fat diet;),
 - **pigment**:
 - **black** – solid, multiple, they occur in the gallbladder during hemolytic jaundice (increased bilirubin);
 - **brown** – oily, usually in the bile ducts during cholestasis and inflammation;
 - **mixed** (most common in the Czech Republic) - multiple, faceted stones, they occur mainly in the chronically inflamed gallbladder, their presence is considered precancerous;
- **according to the shape** –so-called sand ("gallbladder sludge"), larger solitary or multiple stones (multiple stones have a polyhedral shape with flat areas - facets - in places of mutual contact → faceted stones).

Etiology

- **High fat diet** – cholesterol stones;
- **hemolysis** – black pigment stones;
- **cholestasis** – brown pigment stones in the choledochus;
- **inflammation** – brown pigment stones in the choledochus, mixed stones in the gallbladder;
- **stones** can be both a cause and a consequence of inflammation and cholestasis;
- cystic obstruction causes biliary colic and can lead to acute cholecystitis;
- risk factors include high fat diet, obesity, hemolytic states, pregnancy, DM.

Clinical picture

Asymptomatic form

Dyspeptic form

- non-specific symptoms - pressure in the abdomen, nausea, vomiting, belching, flatulence, feeling of tension after eating food with fats;;
- sensitivity in the right lower area under rib cage , positive Murphy's sign.

Colica form

- typical manifestation of the disease;
- when there is closure of the cystic duct with a stone;
- provocative moment - dietary mistake - foods rich in fats, eggs, chocolate, mental shocks, anger;
 - but often just drinking water is enough;
- night attacks - they are explained by easier clogging of the cystic duct in a horizontal position;
- they can happen often, almost daily, or in other cases they do not recur for years.
- **Nature of pain**:
 - sudden onset of severe convulsive pain in the area under right rib cage, radiates under the right shoulder blade;
 - in contrast to inflammation - this pain forces the patient to move and look for a relief position;
 - The pain may spread to the precordium and mimic ischemic coronary heart disease;

Diagnosis

thumb|ERCP – kámen ve žlučovodu

- Simple biliary colic lasts for several hours.
- Prolonged pain - beginning of inflammation of the gallbladder is suspected
- Usually a typical clinical picture, to confirm - USG, X-ray of the abdomen (stones, if they contain Ca²⁺).
- Oral cholecystography, or cholangiography - recommended only after the pain has subsided (for example, after 2-3 weeks).
- The ERCP (Endoscopic retrograde cholangiopancreatography) gives us an accurate idea of the shape and placement.

Complication

- Acute and chronic cholecystitis - we always find different degrees of inflammation, it is difficult to decide what was the first;
- Gallbladder Hydrops - Clogging of the cystic duct, a palpable pear-shaped formation underneath rib cage ;
- Choledocholithiasis - smaller stones pass through the cyst, they can get blocked in the papilla - pancreatitis, obstructive jaundice, cholangitis; ...

When fused with the surroundings, the stones can travel as biliodigestive fistula into the surrounding structures - duodenum, colon transversum, choledochus, abdominal wall - biliary ileus;

- Gallbladder cancer;

Differential diagnostics

- Ulcer, pancreatitis, hepatitis, gallbladder carcinoma, distension of the hepatic flexion of the colon, irritable bowel syndrome, subhepatic appendicitis, kidney, AIM (acute infarct of myocard) and others.

Therapy

thumb|Duodenoskopie – extrakce pigmentového kamenu ze žlučovodu

- We treat colic without infection by resting in bed, local application of warm compresses (if we are sure that it is not inflammation);
- We administer analgesics and antispasmodics (Spasmoveralgin, Dolsin;...).
- The first two days, until calming - a tea diet;
- After subside of the attack - gallbladder diet;
- There is no conservative treatment for lithiasis (other than cholesterol);
 - administration of chenodeoxycholic acid - dissolution of cholesterol stones, frequent recurrences;
- Lithotripsy - compared to the previous treatments it has little results;
- Radical method of treatment - cholecystectomy - classically or laparoscopically;
 - should be performed as soon as possible after evidence of cholelithiasis - this will reduce the percentage of complications;

Links

Related articles

- Diseases of the gallbladder and pancreas in children
- Lithiasis
- Cholecystectomy
- Choledocholithiasis

External links

- Cholelitiáza (https://www.youtube.com/watch?v=UPw3ot1M_o0) – Cholelithiasis - video on YouTube.com

References

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Source

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