

## CHOLELITHIASIS. ETIOLOGY, PATHOGENESIS, CLINIC, DIAGNOSTICS, TREATMENT

*Jumanazarova Mokhinur Jumanazar kizi*  
*4nd year student of the medical faculty of*  
*the Tashkent Medical Academy*

**Annotation:** this article is about what is cholelithiasis and its etiology, pathogenesis, clinic, diagnosis, treatment

**Key words:** Cholesterol stones, hypercholesterolemia, peritoneal symptoms, percutaneous cholecystolithotomy, percutaneous shock wave lithotripsy

Gallstone disease (cholelithiasis) is a disease resulting from the formation of stones (calculi) in the gallbladder and / or bile ducts.

**Etiology.** Gallstone disease is a polyetiological disease with various mechanisms of occurrence of stones in the bile ducts. In humans, the formation of gallstones of the following types is possible.

- Stones predominantly of cholesterol composition.
- Pigment stones, consisting of calcium bilirubinate.
- Calcified (calcareous) stones, consisting mainly of calcium carbonate.
- Mixed cholesterol-pigment-calcareous stones.

Cholesterol stones are formed in normal bile ducts in conditions of excess cholesterol content in gallbladder bile and insufficient content of bile acids. Bile acids are essential for the formation and stabilization of an emulsion of water-insoluble cholesterol. An abnormally high concentration of cholesterol in gallbladder bile can occur in people who have a bad habit of eating no more than 1-2 times a day, as well as during prolonged fasting, including for therapeutic purposes.

In these cases, hypercholesterolemia is due to natural processes of concentration (thickening) of gallbladder bile during prolonged stagnation in the gallbladder. In concentrated gallbladder bile, cholesterol from the colloidal state precipitates, which is called sludge or "sand". From this sediment, as a result of its compaction, compact stones are formed.

Pregnant women and women in labor have very high levels of lipids and cholesterol in the blood. In the first days after childbirth, a large amount of lipids from the blood goes into colostrum. Much of the cholesterol is excreted in the bile.

This way of removing excess cholesterol from the body becomes more important if a woman does not breastfeed her baby and does not express colostrum. With atony of the intestines and gallbladder, which often happens after childbirth, the cholesterol contained in excess in gallbladder bile is concentrated and precipitates, forming a stone.

**Pathogenesis.** The pathogenetic significance of stones in the biliary system depends little on their chemical composition. Of greater importance is the number of stones, their size, position in the biliary tract (in the gallbladder, intra- and extrahepatic ducts), mobility. Gallstone disease and its complications are caused by the following circumstances.

- Mechanical impact of large stones on the wall of the gallbladder or duct, followed by aseptic or septic inflammation, formation of bedsores with further perforation of the wall, development of bile peritonitis, provocation of tumor growth (cholangiocarcinoma).

Clinical forms of gallstone disease - latent (stone carrier), - dyspeptic, - painful paroxysmal, - painful torpid, - gallbladder cancer. However, lithiasis should be considered rather as a period of cholelithiasis, since in the period of 10-15 years after the initial detection of "silent" stones, 30-50% of patients develop other clinical forms of cholelithiasis and its complications. The likelihood of symptoms of the disease in the case of stone carriers is approximately 2-3% per year.

In the dyspeptic form, complaints are associated with disorders of the gastrointestinal tract. Patients periodically or constantly, more often after eating, note a feeling of heaviness in the epigastric region, flatulence, unstable stools, heartburn, bitterness in the mouth. In its pure form, this form of cholelithiasis is rare, since an objective examination can detect pain points in the epigastrium and in the right hypochondrium. Biliary colic is the most common (75%) clinical form of cholelithiasis.

It is manifested by sudden, periodically recurring pain attacks of pain in the right hypochondrium. More often an attack occurs after an error in the diet. The pains are acute, possibly radiating to the back or right shoulder blade, accompanied by reflex vomiting that does not bring relief. An attack of pain lasting more than 6 hours indicates the development of acute cholecystitis. Between bouts of colic, the patient feels well.

Repeated attacks of pain in the right hypochondrium and epigastrium, accompanied by fever, leukocytosis, shift of the leukocyte formula to the left, accelerated ESR, moderate peritoneal symptoms are characteristic of acute

inflammation of the gallbladder. Each recurrence of inflammation should be considered as an acute disease requiring active treatment in a surgical hospital.

### **Diagnosis of gallstone disease**

After the examination, the doctor will prescribe a laboratory and instrumental examination complex to confirm the diagnosis and determine the tactics of treatment.

- Clinical blood test.

### Treatment of gallstone disease

Treatment should be prescribed by a doctor, taking into account the characteristics of the course of the disease. In the case of an asymptomatic course of cholelithiasis and the absence of indications for surgical intervention, a diet and dynamic observation are prescribed.

The therapeutic diet involves a moderate caloric intake, fractional meals with interruptions of no more than 4-5 hours, with the exception of night time. It is recommended to give preference to foods rich in dietary fiber, with a low fat content: fresh fruits and vegetables, cereals, legumes, chicken, turkey, fish.

Fried foods, smoked meats and baked goods should be avoided.

Moderate physical activity is useful in order to prevent hypodynamia (and at the same time stagnation of bile), as well as control body weight (fight against obesity).

The main method of active treatment remains cholecystectomy - removal of the gallbladder with stones. Currently, for this operation, minimally invasive technologies are used, which leave subtle cosmetic defects and allow early recovery.

In the absence of complications in the form of acute cholecystitis, this operation is performed in a planned manner.

There is a technique of percutaneous cholecystolithotomy, when stones are destroyed and removed from the gallbladder through a puncture of the abdominal wall. The disadvantages of this method is the high risk of recurrence of stone formation.

An even less invasive way to break up gallstones is percutaneous shock wave lithotripsy, a technique that uses high-energy waves to break up gallstones in the gallbladder and then shed them naturally. However, there are a number of limitations in the use of lithotripsy and the risk of complications in the form of occlusion of the lumen of the bile ducts with a large fragment of the stone.

Currently, ursodeoxycholic acid preparations are often used for the medical treatment of gallstone disease. They reduce the saturation of bile with cholesterol and change the rheological properties of bile (its fluidity).

**LIST OF REFERENCES:**

1. <https://studfile.net/preview/5016591/page:35/>
2. <https://rsmu.ru/fileadmin/templates/DOC/Faculties/PF/h-surg/zhelchekamen.pdf>
3. <https://www.invitro.ru/moscow/library/bolezni/24900/>
4. [https://www.volgmed.ru/uploads/files/2018-11/95217-ivasenko\\_2018\\_nir\\_terapiya.pdf](https://www.volgmed.ru/uploads/files/2018-11/95217-ivasenko_2018_nir_terapiya.pdf)
5. <https://znzn.ru/pediatrica/zhelchekamennaya-bolezn>

