



Features of the Course of Cholecystocardial Syndrome

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Abstract: Pathology of the biliary system is one of the risk factors for coronary heart disease. Clinicians all over the world have been studying the relationship between acute and chronic diseases of the biliary tract and the cardiovascular system for many years. Often these disorders are detected during an attack of biliary colic, in which pain often occurs in the heart, and in some cases they are equivalent to an attack of biliary colic. In addition to the deterioration of coronary circulation, variants of biliary-cardiac syndrome in the form of cardialgia, cardiac arrhythmias and conduction disorders are described.

Key words: gallstone disease, cholecystocardial syndrome, risk factors, diagnosis.

Relevance: Diseases of the biliary system are registered in 300 people per 100,000 population, which is from 25% to 50% of patients with pathology of the digestive organs. Clinicians from many countries of the world have been studying the relationship between acute and chronic diseases of the gallbladder and extrahepatic bile ducts and the cardiovascular system for many years.

The connection of the pathology of the biliary tract with changes in the activity of the cardiovascular system has long attracted the attention of clinicians. Back in 1813, the work Portal was published, which described 2 cases of death from cardiac arrest during hepatic colic. S.P. Botkin paid special attention to this symptom, who was the first to note the possibility of reflex pain in the heart with cholelithiasis in clinical lectures (1883), since he himself suffered from cholelithiasis from the age of 25, which proceeded with frequent attacks of colic. Based on his own long-term clinical observations, S. P. Botkin concluded that "... often cholelithiasis is expressed in phenomena that focus mainly in the heart, especially in cases where the movement of the stone is performed in the cystic duct. You will not hear complaints of indigestion, pain, bloating, the patient will complain mainly of attacks of pain in the side of the heart, coming with obvious changes in its function, arrhythmia, difficulty breathing, in a word, with a clear picture of angina ..." [5, 10].

To denote cardiac disorders in biliary pathology, various terms have been proposed, the most familiar of which is the concept of cholecystocardial syndrome.

Cholecystocardial syndrome (CCS) is a complex of clinical symptoms manifested by pain in the heart (cardialgia), metabolic disorders in the myocardium with rhythm and conduction disorders, shortness of breath, sometimes deterioration of coronary circulation as a result of reflex and infectious-toxic

effects on the myocardium, resulting from damage by the pathological process of the gallbladder [7, 11, 12].

Cholelithiasis (GI) is considered one of the most common diseases and is second only to atherosclerosis, leaving behind peptic ulcer of the stomach and duodenum. Thus, according to various authors, GCD is detected in 10 - 40% of the population of different ages [2, 13]. The prevalence of housing and communal services varies widely depending on the region. According to research results in Western countries, it is approximately 7.9% for men and 16.6% for women, in Asian countries ranging from 3% to 15%, the incidence of choledocholithiasis is less common among the population of Africa and residents of the Far North, where it does not exceed 5%. There are also differences by ethnic groups, for example, a very high incidence of this disease in Pima Indian women, where it reaches 73%, as well as a high incidence among Native Americans (up to 63%), Spanish and Mexican women [3, 14]. Housing and communal services suffer in Russia among the surveyed population 3-12%, and in Moscow up to 22% [2,3]. The frequency of gallstone formation increases with age, reaching 45-50% in women over 80 years of age [4, 15]. There is evidence that biliary pathology is more common among the urban population compared to rural residents [9].

Cholecystocardial syndrome can develop in the following diseases: chronic stone-free cholecystitis, acute and chronic calculous cholecystitis (maximally manifested during biliary colic), choledocholithiasis without the development of biliary hypertension, with biliary hypertension (with the development of mechanical jaundice), pathological processes leading to narrowing of the terminal part of the common bile duct (stenosing papillitis, tumors of the large papilla of the duodenum, indurative pancreatitis).

In the pathogenesis of cholecystocardial syndrome, it has several mechanisms: reflex effects on coronary vessels, shifts in myocardial metabolism (especially at the time of biliary colic) and infectious and toxic effects on the cardiovascular system in acute inflammatory process in the biliary tract.

In addition to the direct mechanisms of the formation of cholecystocardial syndrome, it is also necessary to take into account that the incidence of coronary heart disease, angina pectoris and rhythm disturbances increases with age, which makes the course of cholecystocardial syndrome especially unfavorable. It was revealed that in the population, angina pectoris at the age of 45-55 years occurs in 2-5% of men and 0.5-1% of women, over 65 years – in 11-20% of men and 10-14% of women [8,16,17].

There are the following clinical variants of CCS [9]:

- ✓ Pain-free form, with transient changes on the ECG and echocardiogram (45%).
- ✓ CCS with severe cardialgia is more common in young people with GI without organic changes in the myocardium and coronary arteries (20% of cases).
- ✓ Mixed form of CCS (30%)

Objective: to study the features of the clinical course of CCS and risk factors.

Materials of the study: 52 patients with biliary pathology who were on inpatient treatment at Clinical Hospital No. 1 were under observation. There were 32 women and 20 men. The average age is 45 ± 5.7 years.

The first group consisted of 30 patients with GI without cardiac pathology. who were diagnosed with coronary heart disease during the examination . The second group included 22 patients with chronic stone-free cholecystitis. The diagnosis of GI and stone-free cholecystitis was confirmed by ultrasound examination, as well as by typical attacks of biliary colic. Along with this, a wide range of biochemical

constants characterizing the functional state of the liver, lipid and protein metabolism was studied. Electrocardiographic and echocardiographic studies were also conducted.

The results of the study: In both groups, the clinical manifestations of cholecystocardial syndrome had several variants. Cardialgic and angina forms of cholecystocardial syndrome are most common in cholelithiasis (79% of patients). Cardialgias were characterized as compressive (67.6%), stabbing pains (49%) in the left half of the chest (43%), with irradiation to the left arm (52%), occurred after a violation of the diet (58%) and more often coincided with a pain attack in the right hypochondrium, lasting several minutes, often resistant to nitrates. ECG in patients with GI had the following changes that were inherent in patients with coronary heart disease: ST displacement by 1-2 mm in 43%, high T wave in 22%, dystrophic and metabolic changes in 55%, impaired excitability function in 23%, paroxysmal form of atrial fibrillation-10.6%, left ventricular hypertrophy was observed in 58% cases, and 20% of patients with GI were found to have non-painful myocardial ischemia [1].

In patients without stone cholecystitis, pain in the heart area was detected in 28% of cases, it was associated with the irradiation of pain from the right hypochondrium to the heart area, rhythm disturbance as extrasystole-14%, paroxysmal form of atrial fibrillation-10.6%, on ECG: dystrophic and metabolic changes 37%, blockade of the right leg of the Gis bundle-9.4%, tachycardia-26%, bradycardia-32% of cases.

The development of heart failure was observed in 12 (23.0%) cases. This is also confirmed by the indicator of the ventricular fraction during doppler cardiography – in the first group of patients it was reduced in 9 (30%) patients, in the second – it was not observed.

It should also be noted that the combination of GI and coronary heart disease had a lot of common risk factors: excessive consumption of fatty and high-calorie foods -56%, hypercholesterolemia-50%, hypertension-46%, obesity-62%, smoking-40%, middle and older age -58%, and in the first group burdened heredity CHD was observed in 10 (33.3%) patients, in the second – 3 – 13.6%.

Conclusions:

1. There is a single mechanism in the development of pathology of the biliary system and coronary heart disease, since hypercholesterolemia, hyperlipidemia are a reflection of complex neuro-humoral metabolic shifts and the influence of other factors that play an important role in the formation of atherosclerosis and the formation of stones.
2. Background cardiovascular pathology (risk factors) has an aggravating effect on the development and clinical course of CCS.
3. For timely and correct diagnosis of cholecystocardial syndrome, the doctor requires perfect knowledge of the methods of thorough collection of clinical history and examination of the patient, it is necessary to be able to analyze the results and confirm the data obtained with the help of laboratory and instrumental examination.
4. Treatment of gallbladder diseases can improve the functional state of the myocardium, reduce angina attacks, improve the quality of life of patients. However, normalization of changes on the part of the cardiovascular system occurs only with timely and early therapy.

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