

**SURGICAL TACTICS IN COMBINATION OF ACUTE CALCULOUS CHOLECYSTITIS
WITH LIVER CIRRHOSIS**

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✓ **Resume**

This article discusses the treatment and treatment of acute cholecystitis in combination with diffuse liver disease, which today is one of the problems of medicine due to its prevalence, complications and the complexity of timely diagnosis. All patients were divided into two groups. Analysis of the results of laparoscopic treatment of 33 patients with acute cholecystitis and chronic diffuse liver disease in group 1 and 30 patients with traditional cholecystectomy with the same diagnosis in groups 2 and 4, treated conservatively, a total of 67 patients before and after surgery were covered.

Key words: cholelithiasis, liver cirrhosis, cholecystectomy, portal hypertension.

**ХИРУРГИЧЕСКАЯ ТАКТИКА ПРИ СОЧЕТАНИИ ОСТРОГО КАЛЬКУЛЕЗНОГО
ХОЛЕЦИСТИТА С ЦИРРОЗОМ ПЕЧЕНИ**

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✓ **Резюме**

В данной статье рассматривается лечение и лечение острого холецистита в сочетании с диффузным заболеванием печени, которое сегодня является одной из проблем медицины из-за своей распространенности, осложнений и сложности своевременной диагностики. Все пациенты были разделены на две группы. Анализ результатов лапароскопического лечения 33 пациентов с острым холециститом и хроническим диффузным заболеванием печени в 1-й группе и 30 пациентов с традиционной холецистэктомией с одинаковым диагнозом во 2-й и 4-й группах, леченных консервативно, всего 67 пациентов до и после операции освещены.

Ключевые слова: желчекаменная болезнь, цирроз печени, холецистэктомия, портальная гипертензия.

**JIGARNING DIFFUZ SURUNKALI KASALLIKLARI O'TKIR KALCULYOS
XOLETSISTIT BILAN KELGAN HOLATLARD A TASHHISLASH VA DAVOLASH
TAKTIKASI**

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✓ **Rezyume**

Xususan makolada xozirgi kecha kunduzda uzining urash darazhasi, asoratlari va uz vaktida tashxislashning murakkabligi bilan tibbiyotning muammolaridan biri bulib kelayotgan jigarning diff casalliklari bilan utkir cholecystitlinggan chushilibirla Barcha bemorlar ikki guruhga bulingan. 1-guruxga utkir xoletsistit va zigarning surunkali diff casalligi bilan kelgan 33 bemorning laparoskopik davo natijalari va 2- guruhga esa ushbu tashxis bilan an'anaviy xoletsistektomiya kilingan 30 bemor bilan konservativ davo muolajalari gashiqi chan yoritilgan.

Kalit so'zlar: xolelitiyoz, jigar sirrozi, xoletsistektomiya, portal gipertenziya.

Relevance

To date, the issues of surgical tactics in relation to the volume and timeliness of surgical intervention in patients with cirrhosis of the liver (LC) with concomitant pathology remain poorly understood, and having single publications on this problem are debatable (Malakhanov V.A., Seliverstov P.V., et al. 2016., Khazanov A.I, 1997; Eramishantsev A.K., et al, 1992).

Acute cholecystitis (AC) is currently one of the most common diseases in emergency abdominal surgery. Significant difficulties for the diagnosis and treatment of AC are present when it is combined with a number of concomitant diseases, and primarily with cirrhosis of the liver (LC) (Nazirov F.G et al., 2019, Gadiev S.I. 2017, Fokin D.V., p. et al., 2012). Until now, there are very few scientific articles devoted to this problem, and the individual experience of the authors in the treatment of patients with a combination of AC and CP is counted in units (Shevchenko R.S. 2012). At the same time, tactical and technical approaches to the choice of the volume and methods of treatment of AC, depending on the functional state of the liver, present particular difficulties.

A feature of cholecystectomy in patients with LC is that when manipulated in the gallbladder neck and hepatoduodenal ligament, their damage is fraught with the development of profuse bleeding from the branches of the venous plexus, which underwent transformation during portal hypertension.

Materials and methods

Another important problem is the significant difficulties and difficulties in isolating the gallbladder from the bed and its subsequent processing (hemostasis and suturing), which was due to pronounced pathomorphological changes in the biochemical properties of liver tissue (stiffness and perforation) and bleeding of damaged liver tissue, especially regenerate nodes. An improperly or insufficiently treated gallbladder bed can often cause these complications. The resulting hemorrhagic complications, as a rule, are difficult to correct due to the purely technical difficulties of local hemostasis, as well as blood clotting disorders, which is characteristic of these patients and requires the use of additional methods of hemo- and bile stasis.

According to several studies, mortality during urgent operations on the abdominal organs in patients with liver cirrhosis can reach 45% (Rafael S et.al 2017). New technical developments that allow the transfer of color images of the abdominal organs from the laparoscope to the monitor screen have led to the beginning of the era of laparoscopic

surgery. This was also facilitated by the undoubted advantages of laparoscopic cholecystectomy (LCE) - low trauma, minor pain syndrome, cosmetology and quick recovery of working capacity. Despite the significant experience in performing LCE in patients with complicated cholelithiasis, cirrhosis of the liver remains one of the main factors that have a negative impact on the intra- and postoperative period (Devyatov A.V. 2018, Kurbonov K.M. et al., 2019). Performing LCE became possible in 90–95% of patients with cholelithiasis requiring surgical treatment (Küper M.A. et al., 2014).

The lack of clear recommendations for the management of such patients and the few attempts to predict risks and analyze the causes of unsatisfactory results make this problem widely disputable and determine the relevance of the study.

Initially, CP with portal hypertension was considered a contraindication to LCE due to the potential risks of bleeding (Nazirov F.G. 2017). With the accumulation of experience in laparoscopic surgery, this minimally invasive approach began to be used in a number of complex situations associated with the gallbladder, including cholelithiasis in patients with LC. At the same time, publications in recent years (Machado N.O. 2018) reported a fairly wide range of rates of postoperative complications (6.6–47.3%) and mortality (0–4.3%) with LCE in patients with LC.

An increase in the surgical field during laparoscopy allows for careful treatment during hemostasis, and pneumoperitoneum appears to play a role in determining hemostasis (baroechostasis). In addition, LCE reduces the risk of infections, incisional hernias and infiltration of ascites through the abdominal wound. The lack of clear recommendations for the management of such patients and the few attempts to predict risks and analyze the causes of unsatisfactory results make this problem widely debatable and determine the relevance of the study.

Thus, summing up the results of the study of scientific literary sources devoted to the diagnosis and surgical treatment of AC in patients with LC, we can conclude that at present there is a clear trend towards an increase in the number of such patients in the structure of gastroenterological morbidity in the population of many countries, including Uzbekistan. Which requires the search and development of new recommendations in the complex of perioperative therapeutic measures and differentiated surgical treatment tactics. The effectiveness of modern instrumental research methods in the diagnosis of AC will be assessed

and criteria for assessing the operational risk, frequency and nature of complications of AC in AC, in patients with cirrhotic liver transformation, will be determined. It will be substantiated that urgent surgical interventions for acute cholecystitis in patients with liver cirrhosis are associated with an increased risk of intra- and postoperative complications and mortality. It will be shown that elective cholecystectomy in this group of patients should be avoided, and emergency operations should be performed for emergency indications in the absence of the effect of conservative therapy in progressive cholecystitis.

The advantages of LCE will be determined, which can be successfully performed with careful selection of patients with compensated cirrhosis, evaluating less blood loss, duration of surgery, and length of hospital stay.

It will be developed and presented for the first time. Improved differentiated surgical tactics of LCE, with cirrhosis according to Child-Pugh A, B and C of certain groups of patients, effective methods of pre- and postoperative treatment of patients with AC and liver cirrhosis.

It will be proved that patients with liver cirrhosis at the Child B and Child C stages should receive treatment and are subject to a more in-depth examination and determination of all the risks of the operation, which will significantly reduce intra- and postoperative complications, and improve the results of LCE.

The implementation of the developed algorithm for the diagnosis of AC in patients with LC with a differentiated therapeutic approach, taking into account the severity of clinical symptoms, as well as the data of laboratory and instrumental research methods, will reduce the time of diagnosis and surgical intervention, as well as improve the treatment results for this category of patients.

Comparing the magnitude of the correlation of many prognosis factors with the outcomes of operations on the biliary tract in patients with liver cirrhosis, a number of researchers have come to the conclusion that the prognosis is significantly reliable based on Child's gradations (Urokov Sh.T., Abidov U.U., 2020; Fomin A.M., Lobakov A. I. et al. 2015; Borodach V.A., Borodach A.V., 2005; Khadzhibaev M.Kh, 2003).

Sh. Sherlock (2002) notes that with cirrhosis of the liver, any operations for the underlying or concomitant disease are accompanied by a high risk of complications and death. According to the author's data, the operational lethality in liver cirrhosis is 30%. In child groups A, B and C, the operational mortality is 10, 31 and 76%, respectively. However, most patients are admitted to a surgical hospital due to a complicated course

of the most common urgent abdominal diseases, often unaware of concomitant diffuse liver damage, which is mostly an intraoperative finding (Urokov Sh.T, Eshonov O.Sh, 2019; Nazyrov F. G. et al, 1994; Sherlock Sh, 2002). Thus, to date, a number of questions on the problems of pathogenesis, diagnosis and treatment of cholelithiasis (cholelithiasis) in patients with diffuse inflammatory liver diseases have no answer, and judgments on some problems are very controversial and require additional study.

In this subchapter, we present a retrospective analysis of the results of examination and treatment of 67 patients who were from 2014-2020 in the Bukhara branch of the RSCMP of the Ministry of Health of the Republic of Uzbekistan for acute calculous cholecystitis (ACC) with concomitant cirrhosis of the liver (LC). Of these, 63 (94%) patients underwent surgical treatment and 4 (6%) patients were discharged after relief of an acute attack due to the severity of the condition caused by LC with portal hypertension (PH) (2 patients) and refusal of surgical intervention in 2 patients. It should be noted that of the last 4 patients, 2 had choledocholithiasis, which was resolved with endoscopic papillosphincterotomy (EPST).

To develop effective and rational surgical tactics, we conducted a retrospective analysis of the results of surgical treatment of patients with ACC with LC. Depending on the tactics used and the type of surgical intervention, the patients were divided into the following groups: Group I - patients who underwent laparoscopic cholecystectomy (LCEC) (33 patients), II - traditional cholecystectomy (TCEC) (30 patients).

In group I, all patients were operated on urgently, while CP without PH was diagnosed in 14 patients, CP with LP in the compensation stage - in 10, subcompensation - in 6, and decompensation - in 3. Varicose veins of the esophagus (varicose veins) and stomach found in 13 patients: I degree - in 7, II degree - in 5 and III degree - in 1 patient. The functional state of the liver in this group of patients upon admission was assessed as follows: class "A" - in 21 patients and class "B" - in 12 patients. On admission, 9 patients were diagnosed with jaundice syndrome. In the last 7 patients, endoscopic retrograde cholangiopancreatography (ERPHG) was performed, in which 5 patients had common bile duct stones and 2 patients had no choledocholithiasis. jaundice was of a parenchymal nature. Patients with choledocholithiasis were operated on after endoscopic debridement of the common bile duct (ESC) and relief of jaundice. With activation of the cirrhotic process in the liver,

2 patients were operated on after a course of conservative therapy and normalization of blood biochemical parameters. After preoperative preparation in this group of patients in 4 patients with functional class "B" there was an improvement in the functional parameters of the liver and general condition, and repeated laboratory monitoring made it possible to transfer these patients to the group of class "A".

During the operation, only 2 patients had profuse bleeding from the gallbladder bed, which was stopped by the coagulation method. In the postoperative period, 1 patient after EPST, stone evacuation and subsequent LHEC showed activation of the cirrhotic process, which was arrested and the patient was discharged in a relatively satisfactory condition. It should be noted that this patient was operated on with a class B functional status. In order to prevent esophageal bleeding, 2 patients with esophageal varices in the postoperative period underwent endoscopic sclerotherapy (ECT) sessions of varicose veins. The sclerotherapy was completed successfully and the patient was discharged.

All patients with CP and ACC, operated on by the laparoscopic method, were discharged in satisfactory

condition. The next group II consisted of 30 patients with ACC with LC who underwent traditional cholecystectomy. 13 patients were urgently operated and 17 patients were urgently operated. CP without PH was diagnosed in 11 patients of this group, LP in the compensation stage in 15 patients, subcompensation in 13 patients, and decompensation stage in 2 patients. Functional class "A" was diagnosed in 16 patients, class "B" - in 12 and class "C" - in 2 patients. In 8 patients, esophageal varices were diagnosed: I degree - in 5 patients, II - in 2 and III degrees - in 1 patient.

On admission, 3 patients showed signs of choledocholithiasis, which was confirmed by ERPCG, endoscopic papillosphincterotomy (EPST) was performed with the evacuation of calculus into the intestine. Subsequently, after relief of the attack and improvement of biochemical parameters, the patient underwent ECT and after another 4 days cholecystectomy. The postoperative period was uneventful and the patient was discharged in satisfactory condition.

The frequency of various complications and mortality in this group of patients are shown in Table 1.

Table 1.

Complications and mortality after TCEC in patients with ACC and LC (n = 30)

Complications	Functional class			Total (%) n = 30
	«A» n = 16	«B» n = 12	«C» n = 2	
Liver failure	2 (12,5%)	4 (33%)	2 (100%)	8 (27%)
Bleeding from ERVP	-	1 (8%)	-	1 (3%)
Suppuration of the wound	1(6%)	1 (8%)	-	2 (7%)
Ascites-peritonitis	-	1 (8%)	-	1 (3%)
Mortality	-	2 (17%)	1 (50%)	3 (10%)

As the analysis has shown, with the deterioration of the functional status of the liver, the number of complications and mortality increase. The most severe complications such as liver failure and bleeding from esophageal varices were more often observed in patients with functional class "B" and "C". Thus, activation of the cirrhotic process with the development of liver failure was observed in 12.5% of operated patients with functional class "A", in 33% with class "B" and in 100% of patients with class

"C". In the postoperative period, 3 patients with functional class "B" and "C" died from the developed complications. Mortality after TCEC was 10%.

The data obtained allow us to assume with some confidence that effective decompression of the biliary tract, even in the absence of choledocholithiasis in patients with LC, prevents the progression of liver failure and improves the immediate results of surgical treatment of patients with ACC and LC.

Table 2.

Complications and mortality after LCEC and TCEC.

View Operations	Functional class						Total (%)	
	«A»		«B»		«C»			
	Comp.	Mort.	Comp.	Mort.	Comp.	Mort	Comp.	Mort.
LHEC (I group)	-	-	1	-	-	-	1 (3%)	-
	n=21		n =12				n=33	
n = 30	2	-	4	2	2	1	8 (27%)	3 (10%)
	n=16		n=12		n=2		n=30	

Note: Comp. - complications. Mort. - mortality

Conclusions

Thus, the analysis of the results of various surgical procedures in patients with LC and ACC without choledocholithiasis or after endoscopic debridement of the common bile duct allows us to recommend the following treatment tactics for this group of patients:

Acute inflammatory process in the gallbladder worsens the functional state of the liver; causes a decrease in metabolic functions and an increase in the activity of the pathological process in the liver.

In patients with LC with simple forms of ACC without choledocholithiasis or after endoscopic debridement of the common bile duct, LHEC is the most optimal surgical intervention.

Surgical treatment of CC in patients with LC with functional class "C" presents an extremely high risk. In these patients, minimally invasive interventions (EPST, CHS) are promising.

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