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A NEW METHOD OF TREATING PATIENTS WITH ACUTE CHOLEDOCHOLITHIASIS

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Abstract. *The results of examination and treatment of 160 patients with acute calculous cholecystitis complicated by choledocholithiasis treated in the department of general surgery of the Central Hospital of the Ministry of Internal Affairs of the Republic of Uzbekistan were analyzed. The aim of the study was to improve the results of treatment of patients with acute calculous cholecystitis complicated by choledocholithiasis by using minimally invasive methods of treatment with nitroglycerin and EAP. At treatment of patients with cholecystitis complicated by choledocholithiasis the use of nitroglycerin and retrograde sanation and lavage of choledochus with EAP-A solution improves the results of treatment and reduces the period of hospital treatment of this category of patients from 12.6 to 8.4 days. All this allows to widely recommend the proposed method of treatment in clinical practice, has economic efficiency.*

Keywords: *calculous cholecystitis, cholangitis, choledocholithiasis, retrograde papillosphinctero-choledochotomy.*

Relevance. All over the world biliary stone disease (BCD) is rightfully considered one of the most common diseases and is second only to atherosclerosis in leadership, leaving behind peptic ulcer disease of the stomach and duodenum[2,3]. In this regard, the treatment of "welfare disease", as figuratively called gallstone disease, is one of the most important problems of modern surgery. According to various authors biliary stone disease affects from 10 to 40% of the population of different ages[1,4]. Lethality in different age groups in acute calculous cholecystitis in conditions of emergency surgery varies from 1 to 50% and more. In planned and delayed surgeries performed against the background of controlled acute inflammatory phenomena, after comprehensive examination and preparation of patients - does not exceed 0.5-1% [5].

Purpose of the study: to improve the results of treatment of patients with acute calculous cholecystitis complicated by choledocholithiasis by using minimally invasive methods of treatment with nitroglycerin and EAP.

Material, methods of research. The work is based on the results of examination and treatment of 160 patients with acute calculous cholecystitis complicated by choledocholithiasis, who were treated in the department of general surgery of the Central Hospital of the Ministry of Internal Affairs of the Republic of Uzbekistan in Tashkent city, for the period 2018-2023.

All patients were divided into 3 groups depending on the method of treatment: I - comparison group consisted of 62 patients with acute calculous cholecystitis complicated by choledocholithiasis, treated in 2018-2023, in whom traditional surgical methods of treatment were applied: retrograde papillosphinctero-choledochotomy (RPSCT) was performed according to indications, II - control group consisted of 52 patients with acute calculous cholecystitis, who received inpatient treatment in 2020-2021. Unlike the I - control group these patients were treated with nitroglycerin, which is a powerful relaxant of smooth muscles causing dilatation of biliary tracts. III - the main group consisted of 46 patients with acute calculous cholecystitis complicated by choledocholithiasis, in the complex of treatment in addition to the methods applied in II - group,

retrograde lavage of choledochal lumen with electroactivated solution EAR-A was applied in order to accelerate the terms of cholangitis process cure.

All examined patients, on the day of admission in an emergency order measured body temperature, respiratory rate, conducted objective examination of the liver (palpation, percussion), ultrasound examination, and if necessary, MSCT or CT scan of the abdominal cavity organs. Laboratory studies of blood were carried out. Conservative general strengthening and symptomatic therapy and preparation for minimally invasive surgical intervention – ERCP with EPST were started.

During retrograde cholangiographic intervention materials for bacteriologic examination were taken from the contents of bile passages. Antibiotic therapy was carried out taking into account sensitivity of the revealed microflora.

In group II, in addition to the above-mentioned standard therapeutic measures used in the first group, ERCP was performed after application of nitroglycerin 0.5 mg sublingually in the form of tablets. ERPST manipulation was started 2-3 minutes after nitroglycerin application.

In the main III group preoperative preparation and conservative methods of treatment were similar as in the previous group. Complex therapeutic tactics in patients of the main group differed from the previous group by application of retrograde lavage of the choledochal lumen with EAR-A solution.

Results and their discussion. The results of the traditional method of treatment of patients with acute calculous cholecystitis complicated by choledocholithiasis of the control group of patients revealed the following interesting points:

At the traditional method of ERPST in 48,5% of cases the successful completion of retrograde choledocholithectomy is not possible due to dense fixation of the concrement in the lumen of the choledochus.

Up to 14,5% of patients at RPSCT due to technical difficulty of removal of a concrement can be complicated by bleeding of local vessels. In this case up to 33,3% of cases hemostasis can be achieved by injection of adrenaline solution into the surrounding tissues in the area of bleeding, 66,6% of patients hemostasis can be achieved by electrocoagulation.

The average duration of successful ERPST operation with removal of the nodule with the traditional method is 80.0±2.8 minutes.

The average duration of successful RPSCT operation with removal of a concrement in the traditional method averages 80.0±2.8 minutes, and when nitroglycyrin is used it averages 32.8±2.4 minutes.

All indices of general blood intoxication, as well as indices of total bilirubin (at the expense of direct bilirubin) in patients with calculous cholecystitis complicated by choledocholithiasis on the day of admission had a reliable deviation from the norm, and in the course of treatment gradually normalized by 8-9 days after the operation. The average duration of hospital treatment in this case averaged 10±1.2 days.

The effectiveness of treatment with nitroglycerin in acute choledocholithiasis in group II patients revealed the following interesting points:

When using nitroglycerin (0.5 mg under the tongue) at ERPST, the unsuccessful removal of stones from the choledochus 48.5% decreased to11.5% of cases.

Up to 5.7% of patients at ERPST due to technical difficulty of removal of the concrement can be complicated by bleeding from local vessels. In this case hemostasis can be obtained with the use of electrocoagulation;

The average duration of successful ERPST operation with removal of a concrement in the traditional method averages 80.0±2.8 minutes, and when nitroglycyrin is used it averages 32.8±2.4 minutes;

All indices of general blood intoxication, as well as indices of total bilirubin (at the expense of direct bilirubin) in patients with calculous cholecystitis complicated by choledocholithiasis on the day of admission had a reliable deviation from the norm, and in the course of treatment gradually normalized by 8-9 days after the operation. The average duration of hospital treatment in this case averaged 10±1.2 days.

Application of mini-invasive methods with nitroglycerin and EAP in treatment of patients with acute calculous cholecystitis complicated by choledocholithiasis in group III patients and at comparative analysis of treatment results of group I and II patients revealed the following features, which have important practical value. At application of nitroglycerin (0,5 mg under the tongue) at ERPST unsuccessful removal of stones from choledochus decreases from 48,3% of cases to 10,8%. The use of nitroglycerin (0.5 mg under the tongue) before ERPST increases the success rate of nodule removal from 38.7% to 89.1%.

Performance of ERPST against the background of common bile duct wall spasm control with application of nitroglycerin 0,5 mg under the tongue decreases technical difficulties of stone removal, thus decreases bleeding complications from 14% to 2,1%, duration of RPSCT time from 60,2±2,8 min to 25,4±1,9 min.

At application of our method of performance forced one-stage cholecystectomy with antegrade choledocholithotomy on the background of acute cholecystitis decreases from 62,9% to 10,8%.

Application of nitroglycerin before ERPST in patients with choledocholithiasis up to 86.9% of cases promotes the performance of cholecystectomy as the second stage of surgery.

Conclusions:

1. Performance of operation in acute cholecystitis with complicated choledocholithiasis in two stages - the first stage in the emergency order of ERPST and the second stage cholecystectomy by minimally invasive method after acute cholecystitis control reduces the average duration of operation from 57,6 to 32,3±2,7 min.

2. After stone removal from the choledochus and within 3-4 days after RPSCT application of retrograde sanation and lavage of the common bile duct with the use of EAR-A reduces complications of long-term cholangitis by 17,7%, accelerates the terms of normalization of total bilirubin and intoxication indices from 8 to 3-4 days.

3. At treatment of patients with cholecystitis complicated by choledocholithiasis application of nitroglycerin and retrograde sanation and lavage of choledochus with EAR - A solution contributes to improvement of treatment results and reduces terms of hospital treatment of this category of patients from 12,6 to 8,4 days. All this, we can widely recommend our proposed method of treatment in clinical practice, has economic efficiency.

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