

METHODS FOR TREATMENT OF CHOLEDOCHOLITHIASIS

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Abstract

The goal - the present article is the collection, compilation and evaluation of the main methods of treatment of patients with cholelithiasis complicated by choledocholithiasis. Analysis of such information will make it possible to improve previously developed devices, as well as to create techniques and devices, the main advantage of which will be a decrease in injuries during surgical treatment options and a decrease in the number of complications.

Materials and methods. The study was carried out on the basis of the RSCMEPBf for the period from 2017 to 2020. The work is based on a retrospective and prospective analysis of the case histories of 60 patients with suspected choledocholithiasis.

Results. The groups are homogeneous in terms of age and sex. The average age of patients in group I was 61.9 ± 1 year; Group II - 59 ± 1 ; The groups were dominated by female patients - 3: 1. Significance of differences $P < 0.005$. For EUS, these indicators were 93.1%, 90.7% and 94.5%, respectively. The diagnostic accuracy of a comprehensive examination is 98.9%. ERCP was chosen as the diagnostic criterion for the information content of EUS in the detection of choledocholithiasis.

Conclusions. The complex use of EUS in the diagnosis of choledocholithiasis allows you to obtain the most complete information about the state of the intra and extrahepatic bile ducts.

Optimization of the diagnostic program allows to improve the results of surgical treatment of choledocholithiasis due to the reasonable use of surgical intervention. Reducing the number of "unnecessary" operations leads to a decrease in the frequency of complications.

The choice of rational surgical tactics directly depends on the diagnostic results. In case of detection of choledocholithiasis, ERCP with papillosphincterotomy and lithoextraction is preferred.

Keywords: cholelithiasis, choledocholithiasis, conservative treatment, surgical treatment, ultrasound examination (US), endosonography (EUS), laparoscopic cholecystectomy, minimally invasive technologies.

Introduction

The problem of treating patients with cholelithiasis has become particularly relevant in recent years due to the continuing increase in the incidence of complications. Cholelithiasis is detected in 5.3—40% of the population [1,2]. Despite the steady growth and improvement of surgical interventions in cholelithiasis, the complication rate of both the disease and the operations themselves remains at a high level. In particular, the frequency of choledocholithiasis varies from 10 to 35%. Moreover, this indicator increases with the age of patients [3,4,5]. With the development of minimally invasive technologies, endoscopic, laparoscopic, minilaparotomy

operations have become the methods of choice in the treatment of choledocholithiasis, but there is still no single standard of treatment for this category of patients. Repeated operations on the bile ducts are not only difficult to perform technically, but in most cases are accompanied by high mortality (7—17%) [6, 7]. Hence, the relevance of the development of low-traumatic lithoextraction from the common bile duct, as well as methods of its drainage, is obvious, especially in the presence of multiple large choledocholithiasis in patients. [8, 9].

To date, the results of treatment of patients with this pathology cannot be considered satisfactory, which makes it necessary to search for new and improve existing methods of treating this pathology

Choledocholithiasis occurs in 8–20% of patients with cholelithiasis, while in 60–70% of cases, mechanical jaundice of varying severity develops. [10,11].

The lack of generally recognized tactics and a variety of approaches in the treatment of choledocholithiasis plays a major role in the development of numerous complications and deaths, which emphasizes the relevance of this problem, forcing us to look for new ways to optimize the therapeutic and diagnostic algorithm of patients with choledocholithiasis and rationalize the choice of surgical technologies. [12,13].

The purpose of this article is to collect, generalize, and evaluate the effectiveness of the main methods of treatment of patients with choledocholithiasis complicated by choledocholithiasis. The analysis of such information will make it possible to improve the previously developed devices, as well as to create methods and devices, the main advantage of which will be to reduce injuries in surgical treatment options and reduce the number of complications.

Materials and methods

The study was carried out on the basis of the RNCMEPf for the period from 2017 to 2020. The work is based on a retrospective and prospective analysis of the case histories of 60 patients with suspected choledocholithiasis. The selection criteria were predictors developed earlier to justify the selective use of intraoperative cholangiography. Taking into account the goals and objectives of this study, all patients were divided into 2 groups depending on the generally accepted algorithm for diagnosing choledocholithiasis (clinical and biochemical blood tests, ultrasound, EGD) of an additional research method. The formed groups were subjected to multivariate studies. Methods of additional diagnostics, types of operational interventions, age and gender were taken into account. In Group I, in addition to standard diagnostic methods, Group I is represented by patients additionally examined by endoscopic ultrasonography (40 patients). In group II, the control group is represented by patients examined using standard methods of examination (20 patients).

Outcomes

The groups are homogeneous in age and sex. The mean age of patients in Group I was 61.9+1 year; Group II – 59+1; In the groups, female patients prevailed – 3:1. The significance of the differences is $P < 0.005$. For EUS, these figures were 93.1%, 90.7% and 94.5%, respectively. The diagnostic accuracy of the comprehensive examination is 98.9%. ERCP was chosen as the diagnostic criterion for the informative value of EUS in the detection of choledocholithiasis.



Internal decompression and sanitation of the bile ducts by EPST in combination with lithoextraction were performed in 40 (52.8%) patients. Endoscopic suprapapillary choleduodenostomy (ECDS) was performed in 20 (4.1%) patients with wedged BDS concrements. In 18 (43.1%) patients, choledocholithiasis could not be eliminated at the first stage by EPST. In order to decompress the bile ducts, external decompression was performed in these patients. Of these, 12 (36.5%) patients underwent percutaneous hepatic drainage of the bile ducts (PCG), and 6 (6.6%) patients underwent percutaneous transhepatic drainage of the gallbladder (PCG) under ultrasound and X-ray television control. Results and discussion: in 34 (35.4%) patients, surgical intervention was performed on an emergency basis. Of these, 32 patients underwent cholecystectomy by laparoscopic access, 16 patients by minilaparotomy access, and 12 patients by laparotomy method. The staged method of surgical treatment was used in 40 (64.6%) patients in the absence of a positive effect from conservative therapy within 6-12 hours. The first stage of treatment in these patients was a percutaneous microcholecystostomy under ultrasound guidance. Cholecystectomy was performed at the second stage after the inflammatory process in the gallbladder subsided and severe concomitant diseases were compensated. In the course of the study, we studied the timing of unblocking of the gallbladder cavity and the subsiding of the inflammatory process in the gallbladder, the dynamics of restoration of the functional state of the liver depending on the severity of liver failure after drainage of the gallbladder and extrahepatic bile ducts on the basis of clinical and laboratory data and instrumental research methods. The course of the inflammatory process in the gallbladder was monitored by ultrasound examination in dynamics. The indicators of gallbladder unblocking were the presence of bile inflow through cholecystostomy drainage, the passage of the concrement from the neck of the gallbladder, as well as the contrast of the bile ducts during fistulocholecystography.

Conclusion:

The complex use of EUS in the diagnosis of choledocholithiasis allows obtaining the most complete information about the condition of the intrahepatic and extrahepatic bile ducts.

Optimization of the diagnostic program makes it possible to improve the results of surgical treatment of choledocholithiasis due to the justified use of surgical intervention. Reducing the number of "unnecessary" surgeries leads to a lower complication rate.

The choice of rational surgical tactics directly depends on the results of the diagnosis. In case of choledocholithiasis, ERCP with papillosphincterotomy and lithoextraction is preferred.

Thus, with the widespread introduction of percutaneous and endoscopic methods and operations with limited access into practice, new opportunities have appeared in the treatment of patients with cholelithiasis and its complicated forms. The implemented tactics of staged treatment, as well as the widespread use of minimally invasive technologies, have allowed us to reduce mortality.

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