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Infuence of Chronic Diseases of a Gepatoduodenopancreatic Zone on Results of Laparoscopic Cholecystectomy

ABSTRACT

The results of 2778 cases of surgical treatment of cholelithiasis are analyzed in this article. The authors detected that the combination of chronic cholelithiasis with diseases of the hepatoduodenopancreatic zone significantly increases risk of performing the laparoscopic cholecystectomy (LCE). High frequency of adhesion is considered as a prime factor, requiring the development of a modified surgical approach. When determining the surgical approach of cholelithiasis treatment in the combination with virus hepatitis it is viable to be guided by immunoenzymometric markers of hepatitis activity. In immunologic inactive forms of virus hepatitis the surgical treatment of cholelithiasis is justified as it restores an appropriate bile outflow and eliminates the inflammatory process. Applying the laparoscopic cholecystectomy at patients with diabetes was justified as well, it preventing obviously the development of destructive forms of cholecystitis.

Keywords: laparoscopic cholecystectomy, cholelithiasis, complications of surgery.

ITRODUCTION

In last decades, laparoscopic cholecystectomy (LCE) has become one of the most important innovations in treating cholelithisiasis. Doubtless advantages of endovideosurgery attracted attention of surgeons globally and presently, LCE became the ‘golden standard’ of treating the cholecystolithiasis. Despite the long-term LCE performance all over the world, there was still a problem of risks and complications of LCE [2], which stipulates applicability of researches held in this field for clinical medicine.

MATERIALS AND METHODS

The article presents 2778 cases of cholelithiasis surgical treatment by materials of the National Center of Medicine of the Republic of Sakha (Yakutia) for 2008 - 2013.

Among hospitalized patients, there were 2303 women (82,9%) and 475 men (17,1 %), which corresponded to literature data on cholelithiasis prevalence. An average age of the patients made up 49,2 years, i.e. mainly active able-bodied persons suffered of cholelithiasis in 70,2 % of

cases, presenting a big socioeconomic problem. Analyses by residence zones showed that among village people the cholelithiasis was more frequent than at urban population.

Considering a matter of surgical approach under combination of the chronic cholelithiasis with coexisting diseases of hepatoduodenopancreatic zone organs, choice of tactical decisions was determined by the necessity of accurate detection of a disease stipulating the main patient's complaints, which was complicated due to similarity of clinical findings in one anatomic zone. Very important aspect of the problem was the necessity of proper evaluation of risk factors of recurrence and development of polypathia in postoperative period and prognosis of polypathia on distant results of surgical treatment.

RESULTS

Combination of the *cholelithiasis and hepatitis* [1] represented an important problem of surgical approach both in diagnostic and the following phases of treatment. We studied 325 (11,7 %) cases. At that, in majority of findings there was a combination with chronic inactive hepatitis noted - 187 (57,5 %) cases, active forms of hepatitis were detected at 127 (39,1 %) people. Among 325 patients, there were 211 (64,9 %) ones with serum hepatitis and 114 (35,1 %) ones with hepatitis C. It ought to be noted that under this combination, the chronic hepatitis and cholelithiasis redoubled each other. [2]. As such, presence of HBs or HCV antigens had not principal importance to solve the matter of performing LCE. In case of detecting hepatitis B or C antigens at a patient it was obligatory to study markers of virus process activity. Additionally, detection of even one positive marker of activity was estimated as active virus process and the planned surgery was postponed till holding the full course of immune therapy at an inflectional diseases' hospital. In postoperative period, all patients received a course of hepatotrophic therapy by all means. Of 325 patients, operations were performed on 187 (57,5%) ones without preliminary course of antivirus therapy, and 127 (39,1%) patients with immunological symptoms of activity received a preoperative course of immune therapy with roferon by a standard scheme. In postoperative period, under detailed study no patient from the both groups had reactivation of hepatitis detected, which could be credited to surgical intervention. Thus, in our opinion, when determining surgical approach under combination of virus hepatitis and cholelithiasis it was viable to be guided by immunoenzymometric markers of hepatitis activity. Under immunologically inactive forms of virus hepatitis surgical treatment of cholelithiasis was justified as it restored an appropriate bile outflow, eliminated a phlogistic focus and by that 'broke vicious circle' of mutual confounding influence of these two diseases.

41 (1,5 %) patients who received laparoscopic cholecystectomy had *nonparasitic hepatic cysts*. Also hepatic haemangioma was detected in 10 (0,4%) cases. Under the nonparasitic hepatic cyst, we considered laparoscopic fenestration of hepatic cyst as the surgery of choice. We performed such surgery at the same time with cholecystectomy in 33 cases. There were no any complications in cases of simultaneous laparoscopic operations (cholecystectomy and cyst fenestration). Thus, under combination of the cholelithiasis and nonparasitic hepatic cysts, performance of the simultaneous operations was justified.

We examined *parasitic hepatic and biliary system diseases* in 19 (4,8 %) cases. Combination of helminthic infection with intraductal localization of parasites and chronic cholesystitis gained the special complication due to mutually confounding influence. Bile outflow disorder caused by the intraductal parasites and chronic biliary ducts inflammation could lead to development of terebrant obturational cholecystitis, cholangitis and cholestatic hepatitis. From our point of view, the surgical approach under the cholelithisiasis at patients with approved helminthosis of biliary system should be maximally active. In postoperative period, a course of anti-helminthic therapy is necessary. 12 patients got such methodic and had smooth postoperative period. By the end of the treatment course, 11 (91,7 %) of them cured from helminthic infection and just 1 patient was transferred to a specialized inflectional hospital for further treatment by reason of inefficiency of anti-helminthic therapy.

Combination of **pancreatitis and cholelithisiasis** was detected at 347 (12,5%) patients, including 17 (4,9 %) cases referred to terebrant reactive pancreatitis. In all cases, a form of pancreatitis was classified as a hydropic pancreatitis. Prevailing majority of patients suffering from chronic pancreatitis had alcohol addiction. In all cases of terebrant reactive pancreatitis and also in cases of performing the LCE on the early stages of polypatia development at 271 (82,1 %) patients, we reached the good clinical effect concerning both cholelithisiasis and pancreatitis. Under the control study, held in 12 months, a considerable decrease or full disappearance of acute pancreatitis' episodes was declared, normalizing the biochemical activities and ultrasound structure of pancreas. In cases when surgery was performed on the background of far reaching indurative changes of the pancreas at 59 (17,9 %) patients, we watched symptoms of chronic pancreas as the independent disease at 36 (61 %) patients. Thus, under combination of cholelithisiasis and chronic pancreatitis, early diagnosis of the polypathia was important and the surgery approach in this case was to be active and aimed at performance of early LCE.

Diabetes and cholelithisiasis. Combination of these diseases formed 3,1 %. Studying the risk of developing the acute destructive cholecystitis at patients suffering diabetes showed that at

86 observed patients who refused the planned LCE, the acute cholelithisiasis developed at 34 (39,5%) people. This aspect witnessed on the necessity to hold early surgical treatment of the cholelithisiasis at diabetes patients. Thus, surgical treatment of the cholelithisiasis in combination with diabetes was the complicated task. At the same time, early application of LCE at this type of patients was justified as it gives the possibility to prevent the development of destructive forms of cholecystitis. Very important factor having great value in treating the diabetes patients was the small injury of LCE and therefore, the low number of pyoinflammable complications.

Analyzing complications of laparoscopic cholecystectomy, we firstly tried to determine the valuable factors of complications' development connected with concomitant diseases of hepatoduodenopancreatic zone organs. Among 2778 surgeries in 65 (2,3%) cases, operations ended with transfer to sternolaparotomy. Complications occurred in 30 (1,1 %) cases, including perioperative ones diagnosed during the surgery at 15 (0,6 %) patients. Also, 15 patients had postoperative complications. There were no fatal cases after LCE.

The main reasons of conversion were connected with the adhesion. In 33 (50,9 %) cases, the direct reason of the conversion were massive visceroparietal and visceral adherence. In 9 (13,8%) cases, difficulties of anatomic orientation were attributed to causes of conversion which were also connected with presence of visceral adherence. As the result, almost 65 % of conversions were connected exactly with the adhesion. So, all 8 cases of biliary duct injury (0,28 %) correlate with presence of visceral adherence. Complications related with intake of troacars (0,25 %) in 7cases occurred just due to adhesion in abdominal space. Among postoperative complications also 3 (0,09 %) cases outstood which were connected with separation of visceral adhesion. The rest complications were typical for LCE in quantity and quality relations. Number of cholelithiasis complications at patients with concomitant diseases of hepatoduodenopancreatic zone organs turned out to be higher than at patients without accompanied pathology.

So, on the basis of the clinical material analyses it was established that combination of cholelithiasis and diseases of hepatoduodenopancreatic zone organs increased the risk of performing LCE. Additionally, the high prevalence of adhesion is considered the basic risk factor, which demands development of modified surgical approach.

SUMMARY

1. When determining surgical approach under combination of virus hepatitis and cholelithiasis it is viable to focus on immunoenzymometric markers of hepatitis activity. Under

immunologically inactive forms of virus hepatitis, surgical treatment of cholelithiasis is justified as it restores an appropriate bile outflow and eliminates a phlogistic focus.

2. LCE application is justified at patients with diabetes, as it gives the opportunity to prevent development of destructive forms of cholecystitis.

3. Combination of cholelithiasis with diseases of hepatoduodenopancreatic zone organs reasonably increases the risk of LCE execution. At that, the main risk factor is big frequency of adhesion, which demands development of modified surgical approach.

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