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EVALUATION OF THE EFFECTIVENESS OF TRADITIONAL SURGICAL METHODS OF TREATMENT OF PATIENTS WITH ACUTE CHOLEDOCHOLITHIASIS

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The treatment of patients with acute cholecystitis remains one of the most urgent problems of urgent surgery. The number of complicated forms of acute cholecystitis reaches 35% of cases and has no tendency to decrease.

The purpose of this study is to evaluate the results of surgical treatment of patients with acute calculous cholecystitis complicated by choledocholithiasis.

The scientific work is based on the analysis of the results of surgical treatment of 62 patients with acute calculous cholecystitis complicated by choledocholithiasis, who received inpatient treatment in 2018-2020 at the Bukhara branch of the RNRMC in the Department of Emergency Surgery.

Key words: *acute cholecystitis, laparotomy, drainage, choledocholithiasis, EAR, nitroglycerin.*

RELEVANCE

Treatment of patients with acute cholecystitis (AC) remains one of the most urgent problems of urgent surgery. The number of complicated forms of OH reaches 35% of cases and does not tend to decrease [4]. Currently, about half of patients admitted to a surgical hospital with acute cholecystitis undergo emergency or urgent operations [6-8]. Postoperative lethality in OC is 2-5% due to the high proportion of complicated forms and after traditional cholecystectomy [2,3].

The frequency of postoperative complications is especially high in elderly and senile patients with concomitant diseases [1]. Numerous scientific forums discuss the tactics and timing of surgical treatment of patients with OH. The choice of surgical intervention method (video laparoscopy, mini-access, laparotomy) depends on the clinical situation, the clinic's equipment and the surgeons ' qualifications. The main method of treatment remains cholecystectomy from laparotomy access. Specialists ' attention is focused on the problem of choosing the most rational method of treating OH [9]. This is especially relevant at present, given the insufficient number of comparative randomized trials in gallstone disease surgery [5, 10, 11]. Tactics and methods of treatment of patients with OH

have undergone numerous changes in recent decades, but there is still no consensus among specialists regarding the choice of treatment for OH.

RESEARCH OBJECTIVE

Evaluation of the results of surgical methods of treatment of patients with acute calculous cholecystitis complicated by choledocholithiasis.

MATERIAL AND METHOD

The work is based on the results of the survey and traditional treatment options 62 patients with acute calculous cholecystitis complicated by choledocholithiasis who were treated in the Department of Emergency Surgery of the Bukhara Branch of the Russian National Center for Medical Research and in the Department of General Surgery for the period 2018-2023.

Results of traditional treatment in 62 patients with acute calculous cholecystitis complicated by choledocholithiasis, who in 2018-2020 were hospitalized in the Department of Emergency Surgery of the Bukhara branch of the Russian National Center for Medical Research. After establishing the diagnosis and conducting clinical, laboratory and instrumental studies, traditional methods of treatment were used in patients. According to the indications, the first stage was retrograde papillosphinctrocholedochotomy (RPC) with the removal of choledochal calculi. After successful completion of the first stage of the operation, active infusion detoxification and symptomatic therapy was performed. After stopping the acute inflammatory process in the lesion and normalization of intoxication indicators, as well as the level of blood bilirubin to days 7-8 conducted by the second stage of surgical intervention is cholecystectomy. In 30 (48.3%) patients, the first stage of the operation was unsuccessful due to the tight insertion and high location of the calculus against the background of severe spasm of the muscular structures of the choledochus. Intraoperative bleeding from the choledochus was observed in 9 (14.5%) patients during the first operation due to technical difficulties. Due to these reasons, 39 (62.9%) patients switched to conversion and performed removal of choledochal stones by antegrade route, with drainage of the choledochal lumen, with simultaneous cholecystectomy, against the background of acute cholecystitis, with high intoxication of the body. 22 (35.4%) out of 24 (38.7%) patients who had concretions successfully removed at the first stage with the help of RSCT, after general detoxification and anti-inflammatory conservative therapy, postponed operations (laparoscopic cholecystectomy) were performed by 7-8 days. In 2 (3.2%) patients who had contraindications to laparoscopic operations, cholecystectomy was performed by an open laparotomy method. Thus, 44 (70.9%) patients underwent open surgery by median laparotomy access.

All patients underwent ultrasound and, if necessary, MSCT of the abdominal organs to clarify the diagnosis and localization of the lesion.

The study of medical records showed that on the first day of treatment, the body temperature in patients averaged 37.8±0.06 ° C. In the general blood test, the average

number of white blood cells was 7.9±0.36 x10^9/l. The number of average molecules was 0.168±0.009. There was also an increase in ESR and leukocyte intoxication index (LII).

Ultrasound examination of the liver, gallbladder, and bile ducts revealed stagnation in the intrahepatic bile ducts and common bile duct due to an obturating concretion, which was expressed by the expansion of the lumen of the intrahepatic bile ducts and the upper part of the common bile duct. 90% of patients showed signs of cholangitis and hyperbilirubinemia on the background of mechanical jaundice. Signs of cholangitis during ultrasound were thickening of the walls of the bile ducts against the background of increased intoxication indicators and an increase in the level of total blood bilirubin, mainly due to direct bilirubin.

Taking into account the peculiarities of the clinical characteristics and surgical tactics used in patients and their distribution by reasons of surgery performed at the first stage of treatment, we decided to analyze the results of treatment separately.

RESULT COMMENTS AND DISCUSSION

Out of 30 (48.4% in 7 (23.3%) patients who did not manage to remove the calculus during CPSCT, the calculus of the common bile duct was localized in the upper third of its part, in 9 (30%) – in the middle part of the common bile duct, in 14 (46.6) the obturation concretion was located in the lower third of the common bile duct.

All patients in this category ERPHG and EPST with lithoextraction it was performed according to the standard procedure. In 16 (53.3%) patients due to the high location and tight fixation of the stone in the bile duct with a stone size of at least 7-8 mm. ERPHG and EPST with lithoextraction it was much more technically complicated and was the main reason for the failure of this operation. Despite performing successful ERCP and papillosphinctrotomy, it was not possible to remove calculi from the lumen of the bile duct within 30-40 minutes. Because of this, it was decided to suspend the procedure and proceed to an emergency-delayed laparotomy after appropriate preoperative preparation. In 14 (46.6%) patients, although the calculi were located in the lower parts of the common bile duct, due to the large size of the stone with dense wedges in the wall of the bile duct, it was also not possible to remove them by RPC. These patients were also operated on by an open route in an emergency postponed procedure.

Due to the high risk of complications during the continuation of CSCT manipulation, it was decided to suspend. For 6 hours, the patients underwent preoperative preparation aimed at stabilizing the neuromo-somatic state and correcting hemodynamics.

Indicators of intoxication of the patient's body are presented in Table 2. As can be seen from the table, on the first day of treatment, the body temperature of patients averaged 38.2±0.04 ° C. The average number of white blood cells was 8.1±0.21 x 10^9/l. The average number of medium molecules was 0.176±0.008. Similarly, there was an increase in LII and ESR.

Table 2

Indicators of intoxication of the body operated on bolnused at the first stage by the open method due to the inability to remove the calculus during RSCT

Indicator	Standard	On the day of receipt	Day 3	Day 5	Day 8	Day 12
t Body ° C	36,6	38,2±0,04	37,8±0,05**	37,2±0,07**	37,0±0,03***	36,7±0,02***
L blood, $\times 10^9$/l	4-9	8,1±0,21*	7,9±0,32**	7,7±0,28**	7,4±0,26**	7,0±0,18**
MSM, units.	0,65-0,75	0,176±0,008	0,172±0,009**	0,160±0,008*	0,118±0,009**	0,84±0,007***
LII, units.	1,1-1,3	1,94±0,05*	1,82±0,06**	1,76±0,07***	1,64±0,05***	1,41±0,04**
ESR, mm / h	2-15	41,2±1,54*	39,2±1,38*	34,4±1,56***	29,3±1,36**	22,3±0,54**

Note. a – p<0.05, b – p<0.01, c – p<0.001 compared to the previous day, on the day of admission-compared to the norm.

On the 3rd day of treatment, there was a slight decrease in body temperature to 37.8±0.05 ° C, the number of blood leukocytes on average decreased to 7.9±0.32×10^9/l. The average number of medium molecules was 0.172±0.009. LII and ESR decreased to 1.82±0.06 and 39.2±1.38, respectively.

By the 5th day of treatment, there was a slight sub febrility (37.2±0.07 ° C). At the same time, all indicators of intoxication of the body (leukocytes, MSM, LII and ESR) continued to decrease, that is, there was a tendency to normalize them (up to 7.7±0.28×10, respectively^9; 0,160±0,008; 1,76±0,07; 34,4±1,56).

With further treatment and follow-up, by day 10, all the analyzed indicators of intoxication in patients, except for blood ESR, were within the normal range.

Table 3 shows the biochemical parameters of the observed patients.

Table 3

Biochemical parameters of blood at the first stage, they were operated on by the open method due to the impossibility of removing the calculus during CPSCT

Indicator	Standard	On the day of receipt	Day 3	Day 5	Day 8	Day 12
Bilirubin, mmol / l: - shared - direct, - indirect	3,4-20,7 0,8 3-3,4 2,5 6-17,3	96,6±4,2 78±5,2 18,43,3	42,4 ±2,3* 24,5 ±2,1 17,9 ±1,4*	32,6 ±1,1 15,7 ±1,2* 16,9 ±0,14	19,4± 2,8* 3,1±0 ,6** 16,3± 0,12 **	18,8± 1,2** 2,7±0 ,4** 16,1± 0,5**
ALT, UNITS / l	up to 40	39,8±3,3	38,1 ±3,3*	37,3 ±,1,2*	36,1± 1,1**	34,8± 1,2 ***
AST, UNITS / l	up to 40	37,6±4,1	35,8 ±2,1	33,4 ±1,1*	32,4± 1,2**	31,6± 1,1 ***

*Note: * - confidence differences from the previous day's data are significant (* - P<0,05, ** - P<0,01, *** - P<0,001). Day of receipt in relation to the norm.*

According to Table 3, the total bilirubin values of the examined patients on the day of admission were 96.6±4.2 times higher than the norm, mainly due to direct bilirubin.±5.2 mmol / l, with a slight increase in the content of indirect bilirubin 18.4±3.3 mmol/l. The values of ALT and AST enzymes were in the upper limit of normal values of 39.8±3.3 U/l and 37.6±4.1 U/l.

After the operation, on the background of complex treatment, the total bilirubin values significantly changed towards normalization by the third day. At the same time, the total bilirubin decreased by half from the initial 42.4±2.3 mmol/l. Accordingly, there was a decrease in the content of direct bilirubin to 24.5±2.1 mmol/l with a slight decrease in indirect bilirubin to 17.9±1.4 mmol/l. These indicators by the fifth day and in the future tended to normalize and by 8-9 days were within normal figures.

It should be noted that 9 patients who experienced bleeding from a branch of the gastroduodenal arteries when trying to remove a stone from the bile ducts, hemostasis was performed by gluing an epinephrine solution into the area of the procedure (in 3 patients), or by electrocoagulation (in 6 patients). Special attention was paid to the hemodynamic parameters of these patients, as well as hemoglobin parameters in dynamics. When analyzing these indicators, no significant differences were found among patients with and without bleeding complications (Table 1). 4).

Table 4

Hemoglobin values (g / l) in patients with bleeding complications during CPSCT compared to patients without bleeding

Category of patients	Standard	1st day	3rd day	8-esutki
No bleeding, n=30	110-160	126,8±4,6	122.2±4,2	123,4±3,8
With bleeding issues, n=9		125,4±3,9	118,4±3,6	121,6±4,1

As shown in Table 4, The hemoglobin values of patients with bleeding complications did not significantly differ from the hemoglobin values of patients without bleeding complications. This shows that the amount of blood loss was small due to timely and successful hemostasis. The average duration of inpatient treatment in this category of patients was 12±.2 days.

As noted above, in 5 patients, despite the fact that they successfully performed the first stage of RSCT surgery with the removal of gallstones, due to the existing contraindications to laparoscopic interventions in the abdominal cavity, these patients underwent open-access cholecystectomy operations one day after RSCT after appropriate preoperative preparation. In two patients with acute choledocholithiasis, the reasons for contraindications to laparoscopic operations were adhesive disease due to previous operations in the abdominal cavity for other diseases. (One patient has a history of surgery for ectopic pregnancy, another for acute appendicitis by median laparotomy access). All these operations were performed under general anesthesia through the upper median approach. The biochemical parameters and intoxication indices of these patients did not differ significantly from the above-analyzed patients of this group.

Drainage tubes were removed from the abdominal cavity of the examined patients on days 6-7 of the postoperative period. The average duration of inpatient treatment for this category of patients was 12-13 days.

As noted above, 22 (35.4%) patients in the group who had successfully removed concretions at the first stage with the help of CPSCT underwent delayed operations (laparoscopic cholecystectomy) after general detoxification and anti – inflammatory conservative therapy by 7-8 days. Operations were performed using a laparoscopic stand. The average duration of laparoscopic surgery was 57.7±3.4 minutes.

Analysis of the results of indicators of intoxication of the body of the examined patients operated on by laparoscopic method revealed the following changes (Table No. 5). As can be seen from the table, on the first day of treatment, the patients ' body temperature averaged 38.3±0.06 ° C. The average white blood cell count was 8.3±0.18 x 10^9/l. The volume of average molecules averaged 0.182±0.018 units. Similarly, there was an increase in LII and ESR.

Table 5

Dynamics of body intoxication indicators operated patients by laparoscopic method, n=22

Indicator	Standard	On the day of receipt	Day 3	Day 5	Day 8	Day 12
t Body temperature, ° C	36,6	38,3±0,06 **	37,4±0,04***	37,2±0,05***	37,0±0,03***	36,8±0,04***
L blood, $\times10^9$ /l	4-9	8,3±0,18 **	7,6±0,34**	7,3±0,22**	7,1±0,28**	7,0±0,11**
MSM, units.	0,65-0,75	0,182±0,018***	0,170±0,011***	0,150±0,018***	0,110±0,012***	0,82±0,009***
LII, units.	1,1-1,3	1,97±0,06***	1,79±0,08***	1,73±0,09***	1,61±0,07***	1,40±0,03***
ESR, mm / h	2-15	43,1±1,62***	39,6±1,4**	36,1±1,3***	28,4±1,3***	22,7±0,8***

*Note: * - confidence differences relative to the previous day's data are significant (* - P<0,05, ** - P<0,01, *** - P<0,001). Day of receipt in relation to the norm.*

On the third day of treatment, there was a slight decrease in body temperature to 37.4±0.04 ° C, the number of white blood cells decreased to an average of 7.3±0.22×10^9/l. The volume of average molecules averaged 0.170±0.011 units. LII and ESR decreased to 1.79±0.08 and 39.6±1.3, respectively.

By the fifth day of treatment, there was a slight sub febrility (37.2±0.05^{0}C). At the same time, for all indicators of intoxication of the body: L, MSM, LII and ESR of blood, their further decrease was noted, that is, there was a tendency to normalize – 7.3±0.22×10^9; 0,150±0,018; 1,73±0,09; 36,1±1,3 accordingly.

With further treatment and observation, by the tenth day, all the analyzed intoxication indicators, except for blood ESR, were within the normal range.

The following laboratory criteria for assessing the disease process were the biochemical parameters of bilirubin, ALT, and AST in the blood (Table 6).

Table 6

Dynamics of blood biochemical parameters operated by laparoscopic method, n=22

Indicator	Standard	On the day of receipt	Day 3	Day 5	Day 8	Day 12
Bilirubin, mmol / l: - shared - direct - indirect	3,4-20,7 0,83-3,4 2,56-17,3	97,7±3,4 79±3,8 18,5±2,8	48,5±2,7 22,6±1,9 17,6±1,3	29,5±1,4 13,8±1,1 16,8±0,11	18,6±2,4 3,0±0,4 16,6±0,1	18,1±1,3 2,5±0,3 16,1±0,4
ALT, UNITS / l	Up to 40	38,7±2,8	38,3±3,5	37,6±2,9	37,2±1,3	33,9±1,4
AST, UNITS / l	Up to 40	37,8±3,7	35,6±2,7	32,9±2,3	32,4±1,7	31,6±1,3

*Note: * - confidence differences relative to the previous day's data are significant (* - P<0,05, ** - P<0,01, *** - P<0,001). Day of receipt in relation to the norm.*

According to Table 6, the total bilirubin of the examined patients on the day of admission was 97.7±3.4, exceedingly almost five times the normal values, mainly due to direct bilirubin 79±53.8 mmol/l, with a slight increase in the content of indirect bilirubin 18.5±2.8 mmol/l. The values of ALT and AST enzymes were in the upper limit of normal values of 38.7±2.8 U/l and 37.8±3.7 U/l.

After the operation, on the background of complex treatment, the total bilirubin values significantly changed towards normalization by the third day. At the same time the total bilirubin decreased by almost two times from the original 48.5±2.7 mmol/l. Accordingly, there was a decrease in the content of direct bilirubin to 22.6±1.9 mmol/l with a slight decrease in indirect bilirubin to 17.6±1.3 mmol/l. These indicators by the fifth day and in the future tended to normalize, and by 8-9 days they had limits in normal values.

CONCLUSIONS

1. Up to 48.5% of cases with the traditional RSCT method cannot be successfully completed retrograde choledocholitectomy due to the tight fixation of the calculus in the lumen of the choledochus.

2. 14.5% of patients with CSCT may have bleeding from local vessels due to technical difficulties in removing calculi. At the same time, in 33.3% of cases, hemostasis can be achieved by injecting an epinephrine solution into the surrounding tissues of the bleeding area, in 66.6% of cases, hemostasis can be achieved using electrocoagulation.

3.Due to the inability to remove stones retrograde, due to technical difficulties or complications of bleeding during CPSCT, in 62.9% of cases, an open operation is performed – cholecystectomy with antegrade cholidochotomy. The average duration of a successful

CSCT operation with calculus removal using the traditional method is 80.0±2.8 minutes on average.

4. All indicators of total blood intoxication, as well as indicators of total bilirubin (due to direct) in patients with calculous cholecystitis complicated by choledocholithiasis, they have significant deviations from the norm on the day of admission and gradually normalizes during treatment by 8-9 days of the postoperative period. The average duration of inpatient treatment is on average 12.6±1.8 days.

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