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EVALUATION OF VARIANTS OF SURGICAL INTERVENTIONS FOR ACUTE CALCULOSIS CHOLECYSTITIS IN PATIENTS OF ELDERLY AND SENIOR AGE

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Abstract
The nature of the complex surgical treatment of acute calculous cholecystitis in elderly and senile patients, under the conditions of gradation age analysis, made it possible to identify a number of theoretical patterns, such as the dependence of the degree of complexity of surgical intervention on the severity of acute calculous cholecystitis, which is not reliable. In most cases, a similar peak value in this rank appears among patients with moderate severity of acute calculous cholecystitis. The ranking of patients in this subgroup between mild and severe severity of the disease does not allow achieving compliance with the planned type of surgical intervention. In our research, this is confirmed by a high level of conversion cases and an increase in the share of the degree of complexity.

Keywords: Acute calculous cholecystitis, elderly and senile age, surgical treatment.

Introduction

The severity of the condition of elderly and senile patients with acute calculous cholecystitis is due to complications of the underlying disease and concomitant diseases (1,4,5,6,7,10,13,14). This category of patients exhibits the "mutual aggravation syndrome", when an attack of acute cholecystitis and subsequent intoxication leads to decompensation of concomitant diseases, which in turn leads the patient to an inoperable condition from the point of view of radical surgery (2,3,8,9,11,12).
All of the above determines the relevance of conducting retrospective analyses of the results of treatment of patients, united by a tactical approach in diagnostics and in complex surgical treatment of acute calculous cholecystitis in elderly and senile patients.

The aim of the study

To evaluate the options for surgical treatment of acute calculous cholecystitis in elderly and senile patients.

Material and methods of the study

The clinical material consisting of 102 elderly and senile patients with acute calculous cholecystitis, who were examined and treated at the Bukhara regional branch of the Republican

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Scientific Center for Emergency Medicine of the Ministry of Health of the Republic of Uzbekistan, was analyzed.

When analyzing the set of criteria for assessing the clinical manifestation of acute calculous cholecystitis in elderly and senile patients, it was found that 41 (40.2%) patients were admitted to our clinic with mild acute calculous cholecystitis. 24 hours after admission to the clinic, after the necessary examination, 23 (22.5%) patients were operated on. The remaining 18 (17.6%) patients underwent trial conservative therapy, which did not give the desired effect. Accordingly, after prolonging the examination and conservative treatment of these patients, all of them were transferred to the category from mild acute calculous cholecystitis to the group with moderate severity. According to modern recommendations, in the category of patients with moderate severity of acute calculous cholecystitis, the laparoscopic surgical method (LHS) should be performed with special caution (11).

In 43 (42.2%) patients, the moderate severity of acute calculous cholecystitis was diagnosed. Among them, 24 (23.5%) patients were elderly and 19 (18.6%) were senile. Severe severity of acute calculous cholecystitis was characterized by the presence of organ dysfunction (failure) of 1 or more organs of the cardiovascular system, respiratory system, central nervous system, kidneys, liver and the presence of thrombocytopenia.

To assess the severity of the condition and the dynamics of the pathological process in patients with acute calculous cholecystitis in the elderly and senile age, we used the Tokyo recommendations. The comorbidity index was determined using the Charlson method . The physical status of patients was assessed using the American Association of Anesthesiologists scale. The complexity of LCE and the need for conversion were assessed using simplified criteria by V.V. Zvyagintsev.

Results and Discussion

Surgical methods of treating acute calculous cholecystitis in elderly and senile patients included the choice of the method and approach to cholecystectomy between laparoscopic (LCE), mini laparotomic approach (MLA) or traditional laparotomy (TLA). Of course, preference was given to LCE, but if this intervention was difficult to perform, conversion was performed with completion by MCE or TLA. Accordingly, when analyzing the results of surgical treatment methods, we took into account only the final versions of the interventions performed.

In 73.5% of cases, the removed gallbladder was destructive. At the same time, among elderly patients, the predominant type of gallbladder lesion was phlegmonous (26.5%), while among senile patients, it was gangrenous (19.6%).

The majority (82.6%) of patients with mild acute calculous cholecystitis had catarrhal and phlegmonous cholecystitis. All of them were elderly patients. In the subgroup of elderly patients, there was only 1 patient with gallbladder empyema. Gallbladder empyema among elderly patients was detected in 3 (75%) patients.

In the subgroup of patients with acute calculous cholecystitis of mild severity, LCE was predominant by a significant margin, being performed in 82.6% of patients.

Cholecystectomy from minilaparotomy access (MLA) was performed in 2 elderly patients. In another 2 patients, cholecystectomy was performed from upper midline laparotomy (UML). The decision to perform this type of surgery was based on the presence of a pronounced adhesive

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process in the area of cicatricial deformation of the gallbladder neck, which was detected at the beginning of the operation using a minimally invasive method.

The distribution of the level of complexity of cholecystectomy in the group of patients with mild acute calculous cholecystitis showed (Table 1) that operations with I and II degrees of complexity predominated (65.2% and 26.1%, respectively).

Table 1. Distribution of the level of complexity of cholecystectomy in a group of patients with mild severity of acute calculous cholecystitis

TYPE OF OPERATION	COMPLEXITY OF CHOLECYSTECTOMY								TOTAL	
	I		II		III		IV			
	ACH	%	ACH	%	ACH	%	ACH	%	ACH	%
LHE	12	63.2	5	26.3	2	10.5	0	0	19	82.6
MHE	2	100,0	0	0	0	0	0	0	2	8.7
OHE	1	50.0	1	50.0	0	0	0	0	2	8.7
TOTAL	15	65.2	6	26.1	2	8.7	0	0	23	100

Difficulties of the third-degree during cholecystectomy arose in 2 patients due to the presence of dense subhepatic infiltrate, necrosis of the gallbladder wall with its fragmentation. Nevertheless, technical difficulties can fundamentally affect the possibility of using LCE.

An analysis of the frequency of cholecystectomies of varying complexity depending on the duration of the disease in patients with mild acute calculous cholecystitis showed that the safest time for performing cholecystectomy within the first 72 hours from the onset of the disease should be considered the maximum permissible.

In moderate severity of acute calculous cholecystitis, destructive forms of the gallbladder were diagnosed to a greater extent (69.8%). In the general group, the gangrenous form of acute calculous cholecystitis was predominant (44.2%).

In terms of age, 24 (55.8%) patients were elderly and 19 (44.2%) were senile. We deliberately focus on this phenomenon, which differs from the mild severity of the disease, where the absolute predominant number of patients were elderly. At the same time, the gangrenous form of acute calculous cholecystitis, which is one of the characteristic criteria of moderate severity of the disease, was predominant in both elderly and senile patients.

The second most common occurrence in the subgroup of elderly patients was gallbladder lesions in the form of acute catarrhal cholecystitis (8 cases). Retrospectively, it can be stated that all of them were in this subgroup of patients with moderate severity of the disease due to the stormy clinical picture and high level of leukocytosis. At the same time, among elderly patients, phlegmonous forms of acute calculous cholecystitis were registered in the same number .

When analyzing the volume of surgical interventions performed in patients with moderate severity of acute calculous cholecystitis, a total of 43 surgical interventions were performed.

As in the general group and in the previous analyzed subgroup, in this case, also, among the predominant were patients who underwent LCE (58.1%). However, this indicator was 24.5% less than among patients with a mild degree of severity of acute calculous cholecystitis.

In 18 patients, the initiated LCE was completed by laparotomy. In 25.6% of cases, MCE and in 16.3%, OCE. In general, this was 24.5% more than in the previously analyzed subgroup of patients.

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Analysis of the distribution of the level of complexity of cholecystectomy in the group of patients with moderate severity of acute calculous cholecystitis showed (Table 2) that operations with III and IV degrees of complexity predominated (25.6% and 44.2%, respectively).

Only 24% of LCEs were of the first degree of complexity. In 68% of cases they were of the third and fourth degree of complexity. Among MCEs, the complexity was of the fourth degree in almost half of the cases. As for OCEs, the complexity of the situation was noted in 71.5% of cases of the fourth degree.

Table 2. Distribution of the level of complexity of cholecystectomy in a group of patients with moderate severity of acute calculous cholecystitis

TYPE OF OPERATION	COMPLEXITY OF CHOLECYSTECTOMY								TOTAL	
	I		II		III		IV			
	ACH	%	ACH	%	ACH	%	ACH	%	ACH	%
LHE	6	24.0	2	8.0	8	32.0	9	36.0	25	58.1
MHE	3	27.3	0	0,0	3	27.3	5	45.5	11	25.6
OHE	1	14.3	1	14.3	0	0,0	5	71.4	7	16.3
TOTAL	10	23.3	3	7.0	11	25.6	19	44.2	43	100

As we have already stated, 36 patients with acute calculous cholecystitis were diagnosed with a severe degree of the disease. The pathomorphological picture of the gallbladder in 100% of cases was destructive. Gangrenous gallbladders (61.1%) prevailed over phlegmonous ones (38.9%) by almost 2 times.

Moreover, in elderly patients, almost all cases were of a phlegmonous nature (92.9%), while more than half of patients with the gangrenous form of acute calculous cholecystitis were diagnosed in elderly patients.

In 44.4% of cases, planned LCE was completed without conversion. However, in 55.6% of cases, surgical treatment had to be transferred to MCE (38.9%) or OCE (16.7%).

To a greater extent, conversions were completed by MCE (38.9%), and to a greater extent among elderly patients (57.1%). Meanwhile, the completion of the conversion of OCE was more prevalent among elderly patients than with MCE (66.7%). In this case, a repetition of the cases noted above is noted, in particular, the erasure of the clinical picture and the complexity of surgical intervention have a certain dependence on the age category of patients. Apparently, this aspect characterizes precisely elderly and senile patients.

The distribution pattern of the complexity level of surgical interventions performed in patients with severe acute calculous cholecystitis shows the prevalence of complexity level IV (Table 3). The predominant complexity was observed when performing LCE (33.3%). At the same time, 25% of LCE cases were of the III degree of surgical intervention complexity. It is noteworthy that we did not observe I and II degrees of LCE complexity in patients with severe acute calculous cholecystitis.

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Table 3. The nature of the distribution of the level of complexity of cholecystectomy in a group of patients with severe severity of acute calculous cholecystitis

TYPE OF OPERATION	COMPLEXITY OF CHOLECYSTECTOMY								TOTAL	
	I		II		III		IV			
	ACH	%	ACH	%	ACH	%	ACH	%	ACH	%
LHE	0	0	0	0	4	25.0	12	75.0	16	44.4
MHE	2	14.3	2	14.3	6	42.9	4	28.6	14	38.9
OHE	1	16.7	2	33.3	3	50	0	0	6	16.7
TOTAL	3	8.33	4	11,11	13	36.11	16	44,44	36	100

Among surgical interventions with MCE, III degree of complexity prevailed (42.9%). To a lesser extent were patients with IV degree of complexity (2 times less than grade 3). Single cases of I and II degree of complexity of the MCE operation were in the same proportion. An exact half of the OCE were III degree of complexity. The remaining operations of this volume were I and II degree of the operation.

In general, it should be noted that the largest number of operations were of a complex degree (80.55%). Often, this was, of course, associated with destructive changes in the gallbladder, as in the previous case. However, the presence of technical difficulties of I and II degrees indicates that the predominant nature of such changes is associated to a greater extent with the preoperative severity of the patient's condition.

The nature of complex surgical treatment of acute calculous cholecystitis in elderly and senile patients, under conditions of gradational age analysis, made it possible to identify a number of theoretical patterns.

The dependence of the complexity of surgical intervention on the severity of acute calculous cholecystitis is known (1,10,11). In our studies, it is not reliable. In most cases, such a peak value in this rank is presented among patients with a moderate severity of acute calculous cholecystitis. Ranking patients in this subgroup between mild and severe severity of the disease does not allow us to achieve compliance with the planned type of surgical intervention. In our studies, this is confirmed by a high level of conversion cases and an increase in the proportion of the degree of complexity.

It seems to us that confirmation of this conclusion is possible only under the condition of an objective assessment of the results of the conducted complex of surgical methods of treatment of acute calculous cholecystitis in elderly and senile patients. In particular, the analysis of complications and mortality among these patients is of interest. This aspect of the clinical material is at the stage of analysis and will be presented in our next publications.

CONCLUSIONS

1. Preoperative assessment of the patient's condition in almost half of the cases does not coincide with the planned methods of surgery. Technical difficulties and the occurrence of intraoperative complications contribute to an increase in the proportion of traumatic surgical intervention.
2. LCE operations in patients with moderate severity of acute calculous cholecystitis were impossible in almost half of the cases. The large proportion of discrepancies in plans when

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performing one or another variant of the operation indicates low reliability of the preoperative assessment of the general condition of patients, detection of the degree of local inflammatory reaction with its subsequent generalization.

3. The number of cases of LCE conversion was significant. In fact, laparoscopy in this category of patients acquired a diagnostic character in almost half of the cases. The discrepancy between the preoperative prognosis of the pathomorphological structure of the gallbladder, the erasure of the clinical picture of complications of acute calculous cholecystitis, contributed to the emergence of "force majeure" circumstances requiring a change in surgical techniques. This, in turn, once again confirms the need to use more objective methods for assessing the manifestation and development of an inflammatory reaction in patients, both elderly and senile.

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