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DIAGNOSIS AND TREATMENT FOR COMPLEX FORMS OF CALCULOUS CHOLECYSTITIS

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ANNOTATION

Acute destructive cholecystitis in combination with choledocholithiasis and purulent cholangitis are one of the most severe and life-threatening complications of biliary tract diseases, which is an acute inflammation of the bile ducts that occurs against the background of a persistent violation of the outflow of bile. Considering the fact that most patients with acute destructive cholecystitis and progressive obstructive jaundice are admitted to general surgical hospitals, different approaches to diagnosis, tactical decisions and treatment are not uncommon. When a diagnosis of complicated forms of cholelithiasis has been established, the choice of surgical intervention method often depends on the capabilities of the hospital on duty and the medical team, and sometimes is determined by the unified treatment tactics approved in a given institution.

Keywords

Liver, cholecystitis, cholangitis, gallstones, ultrasound.

Relevance. Acute cholecystitis and obstructive cholangitis are one of the most severe and life-threatening complications of biliary tract diseases, which is an acute inflammation of the bile ducts that occurs against the background of a persistent violation of the outflow of bile. The leading cause of impaired bile outflow is the development of cholelithiasis, and as retrospective studies show, today every tenth person has cholelithiasis of varying severity, and choledocholithiasis as a complication occurs in 20-30% of cases (Hungness E., 2016).

A feature of this pathology is the development of obstructive jaundice, and statistically in this age group it occurs 35% more often than at a younger age. And it is the development of biliary hypertension, due to mechanical disturbances in the outflow of bile, that explains the formation of cholangitis.

The urgency of the problem has increased due to the increase in the number of patients with complicated forms of cholelithiasis and atypical forms of

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choledocholithiasis, and the increase in surgical activity, especially in elderly and senile patients.

Complicated forms of cholelithiasis in patients of older age groups, especially the elderly, are characterized by a nonspecific clinical picture, high variability and often blurred clinical manifestations, and this is the reason for frequent errors in diagnosis and choice of surgical tactics; today, in more than 20% of cases, a similar one occurs painting. As you know, diagnosing bile duct pathology has its own difficulties, because With this pathology, the clinical picture of damage to the gallbladder is very poor. It should also be noted that stones in the bile ducts very often do not manifest themselves, which is why they are called "silent" stones. All this together is the reason for late hospitalization of patients, so in the first 12 hours only 10-12% of the total number of patients seek qualified medical care, after 24 hours or more about 50% of patients, the rest of the patients are hospitalized in the first three days from the moment of the onset of an acute attack. It is these reasons that lead to an increase in the number of complications, thereby worsening the effectiveness of treatment.

Purpose of the study: Improving the results of treatment of patients with complicated forms of cholelithiasis by developing and implementing tactics of interventions on the biliary tract using diapeutic and X-ray endoscopic methods.

Materials and methods of research. In the main group of patients, percutaneous transhepatic microcholecystostomy (PTMCS) was performed in 40 patients.

To perform PPCM, the examination of patients with acute cholecystitis began with an ultrasound scan of the abdominal organs.

The condition of the gallbladder and peri-vesical tissues was characterized on the basis of determining the size, wall thickness, assessing echogenicity, homogeneity, external-internal contours, identifying changes in the contents of the gallbladder, the state of liquid fractions, the presence and displacement of stones, the echo density of the gallbladder bed .

Acute obstructive cholecystitis at an early stage of its development was characterized by an increase in the transverse size of the gallbladder by more than 30 mm; An increase in the length of the bladder of more than 100 mm was often detected. The wall of the bladder could have been somewhat thickened.

A heterogeneous pattern of echogenicity of the gallbladder wall (a combination of two or more degrees of echodensity) was noted in almost all patients. As a rule, in patients with acute cholecystitis, different parts of the gallbladder wall showed unequal thickness and degree of echogenicity - "layering", which indicated destructive changes in the bladder wall. The peri-vesical infiltrate in acute cholecystitis was characterized by the presence of a space-

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occupying formation of varying echogenicity around the gallbladder. Depending on the echo density, loose and dense infiltrate was distinguished. The loose infiltrate was characterized by reduced echogenicity, heterogeneity of echo density in different areas, looseness, blurriness and unclear contours. The dense infiltrate was characterized by increased tissue echogenicity and echoheterogeneity.

A similar sonographic picture was observed during the formation of a perivesical abscess, with more pronounced hypoechogenicity around the gallbladder.

Thus, ultrasound performed upon admission and in dynamic mode made it possible to obtain accurate information about the size of the gallbladder, the presence or absence of stones, the condition of its wall and peri-vesical tissues, i.e. obtain data on the presence of obstruction of the cystic duct, destructive changes in the bladder wall, the presence of perivesical infiltrate or abscess. In addition, ultrasound made it possible to assess the condition of the extrahepatic biliary tract - size and homogeneity, and made it possible to simultaneously detect the presence of choledocholithiasis and biliary hypertension syndrome.

In our work we used the clinical sonographic classification of V.M. Buyanova (1994).

In the first clinical sonographic class according to V.M. Buyanov included 95 patients without signs of destruction of the gallbladder wall (Fig. 4.1).

The second class of patients with AC (Fig. 4.2) according to V.M. Buyanov was diagnosed at 82 b. The linear dimensions of the gallbladder in AC usually exceeded 100 mm. In 39.9% of cases with AC, a fixed stone was found in the neck of the gallbladder. A sign of empyema of the gallbladder was considered a symptom of "hepatization" in which a hyperechoic suspension was found in its cavity. Progression of echosymptoms and the appearance of blurred and doubling of the contours of the gallbladder wall or dissection of its wall were considered a poor prognostic sign in dynamic ultrasonography.

The spread of the pathological process beyond the gallbladder wall in acute destructive cholecystitis was indicated by the identification of the "double contour" symptom. Further syndromic differentiation depended on the state of paravesical tissues. In the absence of signs of extravesical complications, AC was interpreted as acute destructive without extravesical complications. If ultrasound signs of a local (abscess, infiltrate) extravesical complication were detected in patients with AC, cholecystitis was regarded as acute destructive with extravesical complications, and the patients were assigned to the third clinical and sonographic class.

Third class OH according to V.M. Buyanovu was detected in 113 patients. 105 of them were diagnosed with perivesical infiltrate; 8 had perivesical abscess. Perivesical abscesses were localized in the gallbladder bed and were visualized as

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hypoechoic zones of irregularly rounded shape with unclear contours and a zone of perifocal echogenicity.

The fourth clinical and sonographic class of AC with widespread peritonitis included 35 patients. The development of peritonitis was assumed when ECHO signs of free fluid were detected in the form of mantle-like and triangular echo-negative structures in the subhepatic space, subdiaphragmatic space and pelvis, as well as Morisson's sinus.

Since 2018, in the clinic, patients with severe and moderate severity of the condition with a high operational and anesthetic risk have undergone minimally invasive interventions under sonography control.

Surgical navigation was carried out by determining the intended puncture site, ultrasound guidance of the manipulation, and monitoring the emptying of the gallbladder. The intended puncture site was determined by scanning the right hypochondrium with a convex 3.5 MHz sensor of the Logic-400 or AokaSSD-4000 ultrasound machine.

Under ultrasound control, a point was selected on the skin surface corresponding to the shortest distance between the lumen of the gallbladder and the sensor. At the same time, the need for a transhepatic location of the puncture channel was taken into account. As a rule, the intended puncture point was located in the intercostal space above the costal arch along the anterior axillary line. If the edge of the liver was located low under the costal arch, it was considered possible to choose the puncture site in the right hypochondrium along the lower edge of the costal arch. The site of the intended puncture was marked, and the operator remembered the direction of the upcoming puncture in the direction of the sensor. Then the ultrasound probe was moved to the right hypochondrium and, with continuous scanning, a clear image of the gallbladder appeared on the monitor screen.

It is important to place the ultrasound device probe, gallbladder and puncture needle in the same scanning plane. When the manipulation is performed correctly, the puncture needle is clearly visible on the monitor screen. If it deviates from the planned direction, only the point where the needle intersects the scanning plane is observed on the screen, or navigation becomes ineffective. The penetration of the needle into the lumen of the gallbladder was monitored visually on the screen of an ultrasound machine. To clarify the location of the needle in the lumen of the gallbladder, a small amount of anesthetic solution was injected under pressure. The resulting turbulence of the fluid clearly indicated the correct location of the needle cut in the lumen of the gallbladder. When the syringe plunger was pulled, the contents of the gallbladder began to be evacuated. The first portion of the contents was taken for subsequent bacteriological examination. Evacuation of the contents

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was characterized by a decrease in the volume of the gallbladder to minimal values and immediate resolution of the pain syndrome.

Results and discussion of the work: In the process of mastering the technique, certain importance was attached to the linear dimensions of the gallbladder. Subsequently, this dependence gradually decreased. However, diapeutic measures are effective specifically for the obstructive form of AC. Accordingly, with a "shrinked gallbladder" there is no point in decompressing it.

Important requirements that ensure the possibility of performing puncture sanitation of the gallbladder were the homogeneity and echo-negativity of its contents. Such sonographic characteristics corresponded to the liquid contents of the gallbladder, which made it possible to empty its lumen through a small-diameter needle. In the course of our work, we encountered technical difficulties in navigating a small-diameter 22 G needle, difficulties in aspirating the contents of the gallbladder through a small lumen, as well as the need for repeated decompression sanitation. As a result, it was subsequently necessary to completely abandon this technique in favor of percutaneous transhepatic microcholecystostomy (PTMCS) using the stylet catheterization technique.

During the development of this technique, the main indication for it was considered to be the presence of a symptom of "hepatization" of the gallbladder cavity (Fig. 4.6). Then they began to consider PCMC the only technique that fully satisfies the requirements for minimally invasive decompression in acute cholecystitis.

In order to perform PPMC, the site of gallbladder puncture was marked as described above. After treatment of the surgical field and local anesthesia, the skin was punctured with a scalpel. A stylet-catheter and pig-tail drainage system was assembled. A Chiba 5.5G needle was used as a stylet. For cholecystostomy (we used catheters with a pig-tale bend in the distal part with a drainage diameter of 9 Fr "MIT", Russia, "Balton", Poland). Drains of this diameter are low-traumatic and carry out dosed decompression.

After confirming the location of the catheter cut in the lumen of the gallbladder, the stylet was removed, while pig-tail drainage was carried out to the position of its self-fixation. The contents of the gallbladder were evacuated, collecting material for microbiological examination. The 9 F diameter of the pig-tail catheter made it possible to quickly and easily evacuate the contents even in the presence of necrotic detritus. The reduction in the volume of the gallbladder was monitored by ultrasound scanning. We made sure there was no bleeding or bile leakage by scanning the subhepatic space and the right lateral canal. Having fixed the pig-tail drainage to the skin with two nylon sutures, a device for constant vacuum aspiration according to Redon was attached to it.

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When diagnosing perivesical abscess (9 patients), we tried to perform separate puncture of the abscess and drainage of the gallbladder. It was almost always possible to separately empty the abscess and drain the gallbladder; in other patients, clear positive dynamics were observed during sanitation measures during drainage of the gallbladder.

After installation of microcholecystostomy drainage, traditional conservative therapy for acute cholecystitis was combined with washing the gallbladder cavity with antiseptic solutions.

After the implementation of the diapeutic stage in the complex treatment of acute cholecystitis, ultrasound monitoring of the gallbladder was carried out with a traditional assessment of its size, the condition of the wall, cavity and surrounding tissues. Sonographic dynamics were assessed daily in the first two to three days after the procedure, and then as clinically necessary. The drainage catheter was removed after clinical improvement of the patient's condition, subsidence of clinical and laboratory signs of inflammation of the gallbladder, and visual normalization of secreted bile.

In order to seal the surgical channel with further prevention of bile leakage into the abdominal cavity, drainage of the gallbladder was carried out through a section of the hepatic parenchyma under strict ultrasound control. Regardless of the extent of the surgical intervention, the drainage procedure itself was performed using an “umbrella” stylet catheter with a special “basket” at the end, catheter diameter 4F and 9F.

Conclusion. Prognostically unfavorable factors in the treatment of patients with complicated forms of cholelithiasis are the performance of emergency simultaneous radical operations in patients with acute destructive cholecystitis and purulent cholangitis with severe intoxication according to the Tokyo classification TG 18.

Sonodiapeatic methods of decompression of the gallbladder are an effective emergency method of treating complications of acute cholecystitis, allowing to stop purulent intoxication and at the subsequent stage of treatment to perform cholecystectomy laparoscopically in 29.6% and from a mini-access in 53.7%.

It is advisable to carry out X-ray endoscopic interventions in the scope of EPST with mandatory nasobiliary drainage in cases of purulent cholangitis and hyperbilirubinemia over 100 μmol/l, and EPST was the final method of treatment in 16.1% of patients.

The priority use of minimally invasive decompression interventions in the staged treatment of patients with complicated forms of cholelithiasis contributed to early relief of the infectious process, prevention of the development of biliary and

abdominal sepsis and reduced mortality from 5.1% to 2.4%, biliary and septic complications from 17.5% to 7 .3%.

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