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DIAGNOSTICS AND TREATMENT OF MECHANICAL JAUNDICE ON THE BACKGROUND OF LIVER CIRROSIS

Abstract: *Diagnostics and treatment of mechanical jaundice on the background of liver cirrhosis. The paper presents the results of examination and surgical treatment of 194 patients with diseases of the zone, complicated by obstructive jaundice. Causes of jaundice were: choledocholithiasis — 40%, the pathology of pancreatic cancer — 30%, bile duct strictures — 18%, liver disease — 7%, acute calculous cholecystitis — 5%. For the diagnosis of diseases of hepatopancreoduodenal zone is necessary to use a two-step tactic. Stage I treatment is performed decompression of the biliary tract, which in a number of observations can be the final view of surgical intervention. Radical surgery or stenting of the duct is carried out when the normalization of liver function. Surgical treatment was performed in 155 patients. Cholecystectomy, choledocholytomy with external drainage through the cystic duct stump or from minimal access laparoscopy was performed in 46 patients. Conservative tactics and mini-invasive measures have proved effective in the majority of cases (91,5%).*

Key words: *obstructive jaundice, hepatopancreoduodenal zone, stenting duct, cholecystectomy, choledocholytomy, cirrhosis of the liver.*

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Introduction

Among the surgical diseases of the liver and extra hepatic biliary tract, the most severe patients are patients with obstructive jaundice (OJS) syndrome with the development of liver failure, thrombohemorrhagic syndrome and cholemic bleeding, purulent cholangitis and cholangiogenic liver abscesses, intestinal dysbiosis, as well as a number of other complications, leading to the development of multiple organ failure. Patients suffering from obstructive jaundice (OJ) should be referred to the group of patients with acute surgical diseases. However, in conditions of obstruction of the biliary tract, cholangitis and liver failure, emergency surgical treatment is risky, accompanied by a large number of complications, and the mortality rate reaches 15-30%, which is 4 times higher than in cases

where obstructive jaundice can be eliminated before surgery [1, 2,3,4,5]. Among the causes of sub hepatic jaundice, the first place is occupied by cholelithiasis (35-40%), the second is cancer of the head of the pancreas (PJ) (30-35%), the third is cancer of the extra hepatic bile ducts (10-12%) and, finally, cancer of the greater papilla duodenum (GPDD) (1-2%).

II. Literature review

At present, with the existing variety of options for treatment tactics, most authors consider the optimal treatment of patients with breast cancer in two stages. At the first stage, one-stage or prolonged decompression, sanitation of the gallbladder or bile ducts, which allows to stop clinical and inflammatory manifestations of the disease, prepare the patient and perform the second, main, stage of surgical treatment

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- to eliminate the cause that caused the breast. This tactic of treatment makes it possible to achieve a decrease in the number of postoperative complications and a decrease in the overall mortality rate.

Certain achievements in the diagnosis and treatment of this severe pathology noted in recent decades are associated primarily with the active introduction of new (or improvement of known) diagnostic methods into wide clinical practice, the use of modern minimally invasive technologies - laparoscopic, endoscopic, ultrasound, X-ray television and others, as well as their combinations.

III. Analysis

If, based on complaints, medical history, physical examination data, routine laboratory diagnostic methods, as well as screening ultrasound (USE), the likelihood of obstructive jaundice seems to be high, and the diagnosis is unclear, then in the future it is advisable to use contrasting methods of the biliary tract, endoscopic retrograde cholangiopancreatography (ERCPG) or percutaneous transhepatic cholangiography (PTCG). Due to their informativeness and minimally invasiveness, these methods have taken a leading place in the treatment and diagnostic complex for breast cancer [6,7,8].

The main complications associated with transpapillary manipulations are reactive pancreatitis of varying severity, bleeding from the PDS area, bile ducts and pancreatic duct system, perforation of the duodenum wall or ducts, acute cholangitis [9,10,11]. At the same time, the issues of modern diagnostics and rational therapeutic tactics in breast cancer remain one of the most difficult and largely unsolved problems in abdominal surgery. So, the main task of surgical intervention in breast cancer is decompression of the biliary tract, elimination of obstruction, elimination of jaundice and prevention of the onset or progression of liver failure.

The aim of this work is to evaluate the effectiveness of decompression methods in the treatment of patients with OJS to determine the algorithm of treatment tactics in this category of patients.

For the period from 2014 to 2019, 194 patients with OJS of various geneses were in inpatient treatment in the surgical department of the Bukhara branch of the RSCEMP.

Examination in 80 (41.4%) patients revealed cholelithiasis, choledocholithiasis, 40 (20.6%) - pancreatic head cancer, 15 (8%) - acute pancreatitis, edematous form, 13 (7%) - PCES, choledocholithiasis, in 8 (4.1%) - a tumor of the hepatic hilum, in 6 (3.1%) - benign strictures of the common bile duct against the background of gallstone disease, acute calculous cholecystitis; strictures of the common bile duct against the background of PCES, strictures of the biliodigestive anastomosis, strictures of the common bile duct against the background of

asymptomatic cholecystolithiasis and acute cholangitis - in 4 (2%); stenosis of the Vater's papilla, metastatic lesion of the liver and stone of the gallbladder stump - in 3 (1.5%) patients.

There were 138 (71%) women and 56 (29%) men. More than 60% of patients were over 60 years old.

Specific manifestations of OJS - yellowness of the sclera and skin - were detected in 83% of patients, darkening of urine and acholia feces - in 40%, pain and a feeling of heaviness in the right hypochondrium and upper abdomen - in 87%, in 61% dyspeptic syndrome was revealed (nausea, dryness or bitterness in the mouth, heartburn, belching, loss of appetite, changes in the nature of the stool). Itching with characteristic scratching on the body was observed in 19% of patients, and an increase in body temperature - in 13%.

The diagnostic program included traditional laboratory research, ultrasound examination, computed tomography, endoscopic retrograde cholangiopancreatography (RCPG), and percutaneous transhepatic cholangiography. Diagnostic methods made it possible to identify the cause of the obstruction of the bile tree, the level and degree of occlusion, in case of tumor lesion - the stage of the process (distant metastases, invasion of the vascular structures). The main diagnostic method was ERCPG, which was performed in patients with OJS, as well as in all patients with suspected calculi in the extrahepatic bile ducts. 194 ERCPG were performed, of which 63 were diagnostic and 131 were therapeutic.

In 73 (55.7%) patients, EPST was performed, of which 58 (44.3%) patients for choledocholithiasis. Therapeutic tactics for choledocholithiasis has now become more active in connection with the development of various methods of lithoextraction and lithotripsy. Lithoextraction is indicated for patients with a burdened history, when repeated control studies are undesirable, with a high probability of stones wedging in the terminal part of the common bile duct during their spontaneous discharge, with many small stones. Lithoextraction is contraindicated when the diameter of the calculus exceeds the diameter of the terminal part of the common bile duct and the size of the papillotomy opening.

IV. Discussion

The stones were removed with a Dormia basket, their number varied from 1 to 9, the largest diameter of the removed stone was 14 mm. Mechanical lithotripsy was used for single calculi with a diameter of more than 10 mm with a narrow terminal section of the common bile duct, multiple stones of hepatic choledochus, closely adjacent to each other, while maintaining the sphincter apparatus of the PDS in young patients. The volume of the dissection was determined by the purpose of the intervention. For stenting of the common bile duct in 12 (6.2%)

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patients, there was no need to perform an extended papillotomy incision, which exceeds the risk of complications. The arthroplasty technique did not differ from that used in the standard situation in 35 (18%) patients.

During ERCPG, difficulties were caused by anomalies in the location of the bile ducts, parapapillary diverticula, which were found in 42 (21.6%) patients. Bleeding from the papillotomy area developed in 4 (2%) patients who achieved endoscopic hemostasis. The low trauma of percutaneous transhepatic endobiliary interventions, their high efficiency as a method not only for preoperative preparation of patients, but also as an independent low-traumatic surgical method of treatment contributed to the achievement of a positive result in treatment.

Percutaneous transhepatic cholangiostomy (PTCS) was performed in 92 patients using a modified Seldinger technique (stylet-catheter), including 55 (59.8%) patients with tumor lesions of the pancreatoduodenal zone. PTCS provided external drainage of bile in 31 (34.2%) patients, external-internal drainage - in 32 (35.3%) patients and separate drainage of the hepatic ducts - in 28 (30.5%). Prolonged or constant external bile diversion in tumor genesis OJS is associated with metabolic disorders that are difficult to compensate, which requires the return of bile to the digestive tract.

After normalization of liver function, the following were performed: laparoscopic cholecystectomy with revisions of the extrahepatic bile ducts, cholecystectomy from a mini-access with drainage of the common bile duct, choledochoduodenoanastomosis, choledocholithotomy, in 35 cases using stents. Plastic stents were used when planning a radical surgical treatment at the next stage. With a predicted life expectancy of patients up to 6 months, the most effective and long-term drainage of the bile ducts is provided by nitinol stents; they can be recommended for inoperable tumors of the biliopan-creatoduodenal region.

The use of new-generation coated nitinol stents (taking into account the possibility of their removal) is a promising method for the treatment of benign diseases. The need to replace the endoprosthesis arises no earlier than 6 months later; the average life of a metal stent is approximately 1 year. When choosing a method of bile diversion, the following factors were taken into account: the level of obturation of the biliary tract (proximal or distal), the spread of the pathological process to the surrounding organs and tissues and the patient's condition (is it planned after a

radical surgical intervention), the predicted life time after minimally invasive intervention, if radical the operation is not indicated, the likelihood of possible complications, material and technical support and the possible quality of technical performance of one or another method of minimally invasive intervention. OJS patients underwent conservative therapy, preliminary decompression of the bile ducts, and surgery. Conservative therapy made it possible to arrest the manifestations of the breast in 39 patients (20%). In the biochemical parameters of the blood, pronounced changes were noted, indicating liver failure, 48% of patients were hospitalized with severe and moderately severe hepatic failure. 106 patients (68.5%) were operated on urgently. Urgent (within 24-72 hours after admission) operations were performed in 49 (31.5%) patients when instrumental decompression of the bile ducts was not feasible.

For radical surgical treatment, three methods were used - endoscopic, surgical and combined. Preliminary decompression of the biliary system using minimally invasive methods (EPST, PTCS, NBD) was performed at a high risk of surgery in 94 patients (60.1%), the optimal time for performing the second stage is the third week after drainage of the biliary tract; with a longer decompression, acholic syndrome develops. In 9 (4.6%) patients aged 61 to 89 years, puncture and drainage interventions were performed under ultrasound control. Postoperative mortality was 10.6% (16 patients out of 155 operated patients).

The causes of death were, firstly, progressive hepatic-renal failure, and secondly, concomitant diseases in the stage of sub- and decompensation (cardiovascular and respiratory failure), since 60% of patients were over the age of 60 years.

V. Conclusion

1. Comprehensive examination of a patient with OJS allows accurate diagnosis of pathology, determination of differential treatment tactics for patients and determination of indications for endoscopic and surgical treatment of patients in order to eliminate the cause of obstructive jaundice and restore bile passage.

2. In treatment it is necessary to use a two-stage tactic. At the first stage, drainage manipulation is performed, which can become the method of choice of surgical intervention. Radical operations or stenting of the ducts are performed after normalization of liver function.

3. Endoscopic methods are indicated for pathology of the head of the pancreas and the greater duodenal papilla.

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References:

1. Karimov, Sh.I. (1994). *Endobiliary interventions in the diagnosis and treatment of patients with obstructive jaundice.* (p.239). Tashkent: Publishing house im. Ibn Sina.
2. Karimov, Sh.I., Khakimov, M.Sh., Adylkhodzhaev, A.A., Rakhmanov, S.U., & Khasanov, V.R. (2015). Treatment of complications of periampullary endobiliary interventions in obstructive jaundice caused by periampullary tumors. *Annals of Surgical Hepatology*, No. 3, pp.68-74.
3. Kubachev, K.G., Borisov, A.E., Izudinov, A.S., Khromov, V.V., & Sagitova, D.S. (2009). The choice of a method for drainage of bile ducts in obstructive jaundice of tumor genesis. *Annals of surgical hepatology*, V. 14, No. 3, pp.56-62.
4. Lessons, Sh.T., & Abidov, U.O. (2020). *Obstructive jaundice syndrome.* (p.21). Bukhara.
5. Rutenburg, G.M., et al. (2008). The effectiveness of the use of minimally invasive surgical approaches in the surgical treatment of choledocholithiasis. *Endoscopic surgery*, 1: 3-4.
6. Andreev, A.V., Prikhodko, A.G., & Avakimyan, V.A. (2008). Ultrasound diagnostics and minimally invasive methods of treatment of complications of the early postoperative period in diseases of the liver and bile ducts. *Annals of Surgical Hepatology*, T. 13, No. 3, pp. 20-24.
7. Lutsevich, E.V., & Meshkov, V.M. (1998). *Minimally invasive endoscopic interventions in patients with choledocholithiasis.* Proceedings of the symposium "Intraluminal endoscopic surgery", (pp.54-55). Moscow.
8. (2006). *Guide to surgery of the biliary tract*, ed. Galperina E.I, Vidar-M, p.568.
9. Kozlov, A.V., Polikarpov, A.A., & Tarazov, P.G. (2003). *Biliary arthroplasty for liver and bile duct cancer complicated by obstructive jaundice.* Abstracts. report NC dedicated to the 85th anniversary of TsNIRRI "Modern technologies in clinical medicine." (pp.154-155). SPb, October 8-10.
10. Fomin, A.M., Lobakov, A.I., Titova, G.V., & Zakharov, Yu.I. (2015). Evaluation of the effectiveness of plasma sorption (Liver Support) in liver failure in patients with obstructive jaundice. *Almanac of Clinical Medicine*, 40, pp. 101-108.
11. Jepsen, P. (2010). Surgical risk for patients with liver disease / P. Jepsen, H.T. Sorensen. *Ugeskr Laeger*, V.168, N.49, pp.299 - 302.