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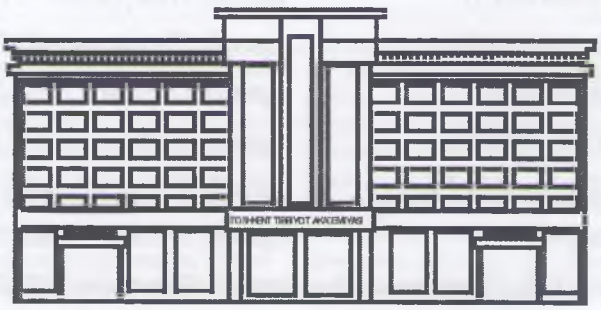

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THE FEATURES OF DIAGNOSTIC AND TREATMENT OFPERIAMPULLARY TUMORSCOMPLICATED BY MECHANICAL JAUNDICE

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МЕХАНИК САРИҚЛИК БИЛАН АСОРАТЛАНГАН ПЕРИАМПУЛЯР ЎСМАЛАР ДИАГНОСТИКАСИ ВА ДАВОЛАШНИНГ ЎЗИГА ХОС ХУСУСИЯТЛАРИ

Хакимов М.Ш., Адылходжаев А.А., Юнусов С.Ш.

ОСОБЕННОСТИ ДИАГНОСТИКИ И ЛЕЧЕНИЯ ПЕРИАМПУЛЯРНЫХ ОПУХОЛЕЙ, ОСЛОЖНЕННЫХ МЕХАНИЧЕСКОЙ ЖЕЛТУХОЙ

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Мақсад: *периампуляр ўсмаларида янги даво диагностик алгоритмни ишлаб чиқариш ва хирургик даво натижаларини яхшилаш.* ***Материал ва усуллар:*** *2004-2014 йилларда РНЦЭМП ва ТТА 2-клиникасида стационар даволанган 283 та беморларнинг периампуляр ўсмалар билан даво натижалари таҳлил қилинди.* ***Натижа:*** *ретроград ва антеград эндобилиар аралашувларни ва юқори информатив диагностика усулларни билан қўллаганда, даво-диагностика алгоритми ишлаб чиқарилди.* ***Хулоса:*** *периампуляр ўсмалари механик сариқлик билан асоратланган беморларда диагностикаси комплекс лаборатор-интсрументал усулларига асослашиш керак. Комплекс УТТ ва МРПХГ усуллари биргалигида ўт йўлларини анатомик тузилишини, ўсма блокини аниқлашга ва оптимал декомпрессия усулини танлашга ёрдам беради ва МСКТА билан резектабел ҳолатни аниқлашга ёрдам беради.*

Калит сўзлар: *периампуляр ўсмалари, механик сариқлик, жигар орқали эндобилиар аралашувлар, гастропанкреатодуоденал резекция.*

Цель: *улучшение результатов хирургического лечения периампулярных опухолей путем разработки и внедрения лечебно-диагностического алгоритма.* ***Материал и методы:*** *проанализирован опыт лечения 283 больных с периампулярными опухолями, осложненными механической желтухой, находившихся на стационарном лечении во 2-й клинике ТМА и в РНЦЭМП в 2004-2014 гг.* ***Результаты:*** *на основании разработанных тактических и технических приемов выполнения ретроградных и антерградных эндобилиарных вмешательств, а также применения высокоинформативных диагностических методов и усовершенствованных лечебных манипуляций разработан и внедрен усовершенствованный лечебно-диагностический алгоритм.* ***Выводы:*** *диагностический поиск периампулярных опухолей, осложненных механической желтухой, должен основываться на комплексном использовании лабораторно-инструментальных методов диагностики. Применение УЗИ панкреатобилиарной зоны с МРПХГ позволяет определить анатомическое строение желчевыводящих путей, уровень опухолевого блока и выбрать оптимальный способ декомпрессии желчевыводящей системы, а МСКТА определить резектабельность опухолевого процесса.*

Ключевые слова: *периампулярные опухоли, механическая желтуха, чреспеченочные эндобилиарные вмешательства, гастропанкреатодуоденальная резекция.*

Periampullary tumors (PAT) develop in the indissoluble anatomical and functional connection organs – pancreas, duodenum, Vater's papille and ter-minal part of the choledoch – with the common clinical manifestation of the tumor lesion, namely the violation of the outflow of bile with the extension of mechanical jaundice (MJ).

During the last years the incidence of periampullary tumors increase and unfavorable prognosis. The mainly approach – it is radical, namely – surgical. But it is conditional, because the majority results are not satisfactory. So, dur-ing the first year after operation, 80-96% of patients to die from the disease progression. Three- and five-years survival observed in part of patients with I-II stage of disease [1-4]. The median of survival of patients, by according of american source 4.1 months, five years survival less than 5% inter diseased [18,20,23]. The ratio of mortality to incidence by according of WHO equals 0.99 [10,39]. Another adverse of unfavorable factor of surgeons treatment is the high incidence of postoperative complications 25-75% and deaths as high as 25-35% [17, 19, 24, 39, 43].

To improve the results of treatment of PAT offered various options as the improvement of the surgical technique, and various combinations of radical surgery with chemicoradiotherapy. However, a little progress in finding of ef-fective methods now led to certain contradictions in the approaches to the treatment of this type of tumor.

Early detection of tumors of BPDZ is one of the most difficult issues of radiodiagnostics. The proper assessment of all the manifestations of a patho-logical process have affects to the choice of treatment strategy, and therefore the immediate and late results [5].

Another aspect that limiting approach possibilities to PAT, is that since the onset of first clinical symptoms (MJ, loss of weight, abdominal pain, dys-pepsia) patients are in the advanced stages of the disease, and operative treat-ments do not improve their results . In this situation, the important point the development of new and improvement of diagnostic and surgical treatment of PAT.

Materials and methods

We have analyzed the treatment experience of 283 patients with PAT re-ceiving in-patient treatment in the 2nd Clinic of the Tashkent Medical Acade-my and the Republican Scientific Center of Emergency Medical from 2004 to 2015. All patients were divided into two groups: control – 124 (43,8%) pa-tients using standard medical diagnostic treatment procedures, the main – 159 (56,2%) patients, who using improvement diagnostic treatment procedures.

The age of patients ranged from 29 to 78 years (in mean 53,5±4,8 years). Men were – 155 (54,8%), and women – 128 (45,2%). The ratio is 1:0.83.

The largest number of patients with PAT observed among the middle age groups in both groups of the study, which determined the subsequent tactics of their treatment. All patients received in hospital with MJ. At the same time 224 (79,2%) patients were hospitalized in the medium-heavy and heavy condition, 59 (20,8%) patients was moderate condition.

Results and discussion

Mechanical jaundice in the PAT. causing a number of profound functional disorders in the body, is an independent pathological condition that requires urgent resolution. Decompression of the biliary system, and in some cases, sanitation of the bile ducts is a key step in the treatment of this disease [6,47]. It is (the treatment) should meet the following requirements: to be effective in eliminating cholehemia, less traumatic and accompanied by a low incidence of complications and mortality [8,40].

Based on the foregoing, diagnostic treatment tactics in the control group was based to the complex investigation, that including clinical and instrumen-tal methods of investigation (according to the protocol of the 2nd Clinic of the TMA about management of patients with malignancy genesis MJ). So, for pa-tients from the time of admission to hospital to do complex of laboratory and instrumental methods of investigation with aimed at determining the cause of MJ, block-level of biliary track, stage of liver failure. As a screening method to use ultrasound. In case of bile hypertension, in order to determine the causes of her calling, all patients underwent CT of hepatopancreticbiliary zone. After that performed percutaneous transhepatic cholangiostomy (PCTHChS) with the outer compartment of bile on the removable drainage, followed by re-placement holangiostomic tube on the outer-inner and the inner "skeleton" drainage of the bile ducts.

After stabilization of the condition and possibility of the surgical treat-ment performed radical, palliative surgery and in the controversial situations - diagnostic laparotomy.

It should be noted that the return of bile into the intestine after PCPHChS it had been a beneficial effect on the general condition of patients. There was a rapid improvement in general well-being, improved appetite, restored activity of the intestines and other functional parameters. In addition, the sequential administration of increasing the diameter of the drainage to prepare channel in the liver and in the area of obstruction, reducing the trauma, and the procedure becomes less painful for the patient (efficiency suggestion number 544 from 25.12.07).

These modern literature have shown that PCPHEBI is accompanied by the implementation of a considerable numbers of failures (6,7%) and complica-tions (17.3%). In 11.4% of the patients developed complications for the correc-tion required to perform surgical interventions. The mortality rate in this case may be up to 8,9% [9,11].

The main reasons of these complications are technical difficulties in con-ducting drainage, migration drains in the postoperative period. Mortality in this associated with progressive of hepatic failure, bleeding and peritonitis [9,11,18].

Analysis of postoperative complications in this study showed that the greatest number of complications observed in patients with decompensated stage of HF. In two patients (1,6%) were diagnosed transient hematobilia. In our opinion, this is due to the phenomena concealed DIC, which caused bleed-ing from the intrahepatic arteriobiliary fistula. In six patients (4,8%) had mi-gration cholangiostomy, the cause of which was a change in body position, turn of body to the right and left side. In 18 cases (14.5%), there was progres-sion of HF in the first two days after PCPHEBI. Intensive conservative therapy led to regression of HF to 3-4 days and improvement of condition.

Patients in the subcompensated stage of HF predominant changes in a part of hemostasis and showed an increase a fibrinogen level in 2 times in 10 patients (2,2%) with a decrease in hematocrit of more than 5%.In one case, after PCPHEBI was observed death, which was caused by acute myocardial infarction on a background of coronary heart disease and DIC in the hypercoagulable phase. Pre-operation intensive infusion, antibak-terial, antiinflammatory and gormonal therapy for patients with with cholangi-tis and also curtailment of input contrasting substances during the cholangi-ography, allowed the avoid f specific shock in 21 patients (8,5%) with purulent cholangitis.

The total number of complications after performed endobiliary interven-tion consist 14,5%.

After stabilization of the patients, the diagnostic search supplemented by noninvasive and invasive diagnostic methods. For example, in the control group at diagnosis and assessment of the possible surgery performed diagnos-tic angiography, hemostasiogram, CT of the abdomen. The second step was performed radical or palliative surgery.

The conditions of transition to the second stage of treatment were consid-ered such factors as: the restoration of the basic functions of the body, reduc-ing bilirubin levels less than 60 mmol/l, normalization of liver enzymes (trans-aminases <1,0 mmol/l), total protein (more than 60 g/l), alkaline phosphatase (<300 U/l).

As a radical treatment of 18 patients (14,5%) was performed standard gastropancreatoduodenal resection (GPDR).

The choice of imposing pancreaticodigestiv anastomosis in the reconstruc-tive phase of the GPDR depended from the anatomical localization of the stump of the pancreas, the individual skill of the surgeon. This superimposed anastomosis between the intestine or stomach with the stumpof the pancreas of the type "duct-mucosa," by method of Cattel in the modification by Stras-berg (1949). The main factor aggravating good healing pancreaticodigestiv anastomosis after the GPDR is soft (8 cases) or too tight (fibrosis of gland – 10 cases) consistency of stump of pancreas. In one patient, a small tributary of the portal vein to the pancreatic parenchyma, the stump of the pancreas was mobilized by 1.5 cm from the edge of resection.

At impossibility of comparing the tissue of the stomach and pancreatic stump, because of their tension, in 11 cases it had been imposed pancreaticodi-gestiv anastomosis by the above methods. In 14 patients was performed inside stenting the main pancreatic duct. In 4 cases, the stent has been decided to ab-stain because of the larger diameter of the main pancreatic duct (5-7 mm) and a good visualization of matched tissue of the intestine and pancreas parenchyma.

Analysis of the radical treatment of patients in the control group in the early postoperative period showed that the factors that lead to unsatisfactory results, depend on: preoperative CT data, the HF stage, the duration of MJ, constitutional peculiarities of the organism and the patient's age, state of he-mostasis, the primary tumor site of PAZ, titer of tumor markers, comorbidi-ties, previous operations performed on the PAT, the availability of intraopera-tive data associated often with the stump of pancreas, characterized by the de-velopment "of pancreatic fistula" (PF), diagnosed in 61% of cases.

Thus, the "transient fistula" or PF (Type A), was diagnosed in three (16,7%) patients (16,7%). According to the laboratory studies, the drainage tube installed in pancreaticodigestiv anastomosis, pointed, per diem serous discharge in a volume of 100-120 ml with the concentration of 6-amylase of blood 240 IU/l. This type of PF was one patients (5,6%) with mild parenchy-ma of pancreas, and two cases (11,2%) - with a large diameter of the main pancreatic duct - when the drainage of duct in the stage of reconstruction was carried out.

In four patients (22,2%) were diagnosed pancreatic fistula (type B). Moreover, in two cases the diameter of the main pancreatic duct is less than 2 mm in one case - the density of the parenchyma of pancreas was soft and dense in other. Deaths were not. However, the increased presence of these pa-tients in the hospital and was 34 (group of 4), 44, 46 and 53 bed-days, respec-tively.

In 4 patients (22,2%) occurred PF (type C) whose condition required a re-surgery. In 2 patients had the main pancreat-

ic duct diameter and 2 mm, and in two cases the gland parenchyma was soft. One of them in the reconstructive phase of the GPDR was imposed invaginative pancreatojejunoanastomosis.

In two cases (11,1%), the cause of reoperation was post-operative perito-nitis, which was a consequence of insolvency rear lip pancreaticogastroanas-tomosis splashing of gastric juice into the abdominal cavity. In both cases, it was re-imposed pancreaticogastroanastomosis with additional fixation hemo-static sponge. Both patients died from progressive multiple organ failure, de-veloped on the background of progressive peritonitis. One patient died of acute post-hemorrhagic anemia due to intra-abdominal bleeding.

One patient with a dense, with elements of fibrosis of pancreas in 8th days after surgery developed PF (Type C). From re-surgery, to address the rel-atives had to abstain. On the first day the patient's stay in the hospital after the diagnosis of the PF, in the absence of peritonitis and the proper functioning of drainage, a conservative therapy. The patient's condition remained heavy, de-veloped sepsis with multiple organ failure in the end it led to death.

World Literature data showed that the anastomosis "duct-mucosa" is one of the most frequently used at the proximal anastomosis resection of pancreas. But, as stated in all methodologies are thus complications. So by M. Watanabe [46]. The analysis of 3109 GPDR, with 1502 patients have been imposed anas-tomosis "duct-mucosa." PF developed in 177 patients (11,8%) with post-operative mortality rate of 8,4%. The work A. Kakita [31] shows a modified version of the anastomosis "duct-mucosa" with postoperative failure of 6.2% and 4.4% mortality.

Analysis of our data showed that the presence of PF (types A and B) did not lead to fatal consequences due to ongoing conservative therapy time. Deaths occurred in 4 patients (22,2%) with PF (Type C). Among the other fac-tors that led to the death of patients after GPDR were: the presence of comor-bidity, which led to pulmonary thromboembolism (1 case), decompensated di-abetes mellitus, and prior pleurisy after PCPHEBI, led to the development of respiratory failure and death (1 case), DIC in phase hyper anticoagulation, which led to the first intra-abdominal bleeding, and then - to the acute myocar-dial infarction (1 case).

Given the high percentage (61,1%) postoperative complications and mor-tality (38,9%), as well as by studying the factors leading to unsatisfactory re-sults [33-35,37], the main group of patients was developed complex treatment-diagnostic measures aimed at preventing the development of specific complica-tions of the GPDR. These studies will be described below.

According by Y.I. Patyutko [13], the choice of method to biliary abstrac-tion intervention affects not only the incidence of tumor, but also the projected lifetime of the patient. The most functional method (in terms of the patient's life – more than 6 months) is undoubtedly a surgically-formed gepaticojejuno-anastomosis disabled on the jejunum by Roux. In our studies, we also adhere to this principle.

Palliative surgery in the control group performed in 12 cases (9,7%) (gepatikojejuno- and gastroenteroanastomosis). Preference was given to laying hepaticojejunostomy was disabled jejunum by Roux made eight patients (6.5%). In two cases (1.6%) was performed only hepaticojejunostomy was disabled jejunum by Roux. And the two of them patients (6,5%), since the spread of tumor in the liver and gates duodenal obstruction, was imposed ahead colic gastroenteroanastomosis.

The analysis of complications which develop after palliative surgery in 2 patients (16,7%) in the 4 and 7 days was diagnosed insolvency gepaticojejuno-anastomosis liquidated conservative. The reason for the insolvency were the traumas cholangitis (dense tissue hepaticocholedochus). In one case after 2 months hepaticojejunostomy observed scar stricture gepaticojejunoanastomo-sis with recurrent MJ. Re-PCPHChS achieved with a serial institution cholan-giostomic tube at zone of GEA, and stricture of hepaticojejuno anastomosis with rentgenendobiliar dilatation. Survival analysis showed that the life expec-tancy of these patients was 6,4±4,2 months.

The analysis of unsatisfactory results of the traditional methods of treat-ment, showed that they were due to the following reasons. The first - a rather high percentage of diagnostic errors in the admission of patients to the clinic, which contributed to an incorrect choice of medical tactics, resulting in 12 (9,7%) patients was performed explorative laparotomy. Second – the underes-timation of the severity of the patients at admission and at the final stages of preparation of patients treatments. Third - the underestimation of laboratory and instrumental methods and factors that worsen the results of surgical treatment of patients with PAT. Thus, the use of ultrasound, CT, and diagnos-tic angiography is not allowed to reveal the peritoneal carcinomatosis in four cases (3.2%), the spread of tumor at the gate of the liver in three (2,4%) pa-tients and total destruction of tumor process of pancreas in two patients (1,6%), and the spread in three cases (2,4%) of tumor in the great vessels. Fourth – the underestimation of the factors leading to the development of the PF after the GPDR, the imperfection of techniques aimed at preventing the de-velopment of pancreatic fistula.

In connection with the foregoing, medical-diagnostic tactic core group was based on a comprehensive examination, including clinical and instrumental methods of research. As a screening method to use ultrasound, in addition to which all patients underwent MRPChG, which gave detailed information and the possibility of draining without biliary additional, puncture proof. This has reduced the diagnostic search and avoid complications among patients in the control group.

After determining the anatomical features of the structure of the bile ducts, the HF stages, the duration of breast, presence of suppurative cholangitis planned some form of decompression of billiary additional.

So, depending on the duration of MJ, billiary additional status and physi-cal status of patients in 37 cases (23,3%) performed endoscopic retrograde stenting of billiary additional status and physical status of patients in 37 cases (23,3%) performed endoscopic. The indication for this type of decompression were: unexpressed jaundice; bilirubinemia least 100 micromoles / liter; the ab-sence of cholangitis; technical capability cannulation of Vater's papille.

In other cases, performed PCPHChS. Given that this method is carried out in three phases, implying Outdoor-indoor and internal drainage of billiary additional, which in itself delays the process of recovery of the body and prep-aration of patients for radical surgery, the emergence of new, Flexible drainage company Balton this manipulation is carried out in two stages. This avoids the external-internal intermediate drainage, which significantly reduces the time of preparation of patients for radical surgery.

Data analysis postoperative shown [15,19,21,27,28,29] that the terms previously described method Outdoor-internal. internal drainage of biliary ad-ditional average held from 14 to 18 days, whereas double stage technique of drainage has reduced the period of 8-10 days.

Intensive preoperative preparation included: 1) a preventive antibiotic therapy with the addition of perioperative hormonal methods, the use of seda-tion instead narcotic analgesics "Tramadol" proactive local and general hemo-static therapy for hemobilia. 2) In the absence of the effect of these measures rapid transition to re-install cholangiostomy, bed rest for 3 days after Re-PCPHChS with careful control of the ad-

equacy of drainage. All this set-up al-lowed, on the one hand to reduce the rate of complications from 13 to 6% and on the other, substantially reduce the patient's recovery period.

Thus, PCPHEBI perform the above procedure, and application of endo-scopic stenting allowed in a short time to prepare patients for the second phase of treatment.

So, for aggravating factors underlying disease after CPHEBI or endoscop-ic stenting are it is hemorrhagic (80%), and infectious complications, as well as bile leakage into the abdominal cavity.

For the early postoperative period is characterized by an increase in the frequency of pulmonary complications compared with heavy (mainly due to the dislocation of drainage). Suppurative complications are more common dur-ing the recovery and later periods [6,8,14].

The analysis of data of the postoperative period showed that 108 cases (67.9%) showed normalization of liver function and improve the functional state of the organism, which is reflected in the dynamics of total bilirubin and total plasma protein.

In two cases (0.8%) were observed migration of cholangistomy with the development of bile peritonitis. The patients were performed laparoscopic ab-dominal sanitation correction cholangiostomy position, thus avoiding fatal consequences. Both patients were discharged in satisfactory condition for 7-8 days after surgery. And in two patients (5,6%) after endoscopic stenting was recorded bleeding Cropped conservatively. In one case after endoscopic stent-ing developed suppurative cholangitis, requiring PCPHChS. Of deaths in this group after retro antegrade interventions were not.

After the relief of jaundice, and normalization of laboratory parameters, in order to determine resectability, MRPChG addition, all patients underwent MSCTA. Long wearing cholangiostomy gives information about a possible in-crease in the volume of education in the gate area of the liver, development of duodenal compression or duodenostenosis. From this perspective, patients are sometimes refused surgical treatment, but later agreed. 12 patients (7.5%) un-derwent fistulocholangiography with 3D-technique. After determining the func-tional state of the body treatment moves into its final stage.

An analysis of clinical material of the main group showed that in the ma-jority of cases the patients were in II-III stage of disease.

An integrated approach to the study of this issue, as the prevalence of tumor process based on the comparison of the clinical and radiological meth-ods of examination, allowed us to assess the possibility of surgical treatment of PAT, according to the classification NCCN, 2013

So, if respectable states GPDR performed in 26 patients (16,4%), with unresectable states – palliative anastomoses in 20 patients (12,6%). On chemo-radiotherapy was directed 101 patients (63.5%). When border states resectable patients, to determine further tactics in 12 cases (7,5%) was performed diag-nostic laparoscopy (DL).

Indications for DL is considered: the duration of the jaundice (over 1 month), long wearing cholangiostomy (more than 3 months), the presence of micrometastasis suspected liver, suspected tumor invasion into the gates of the liver.

Absolute contraindications to DL are: decompensated stage liver failure, severe somatic status, clear signs of unresectable PAT, as well as general con-traindications for laparoscopy.

DL allowed in two cases (16,7%), the move to the radical removal of the tumor. In the same number of patients due to the inability to determine the presence of locally advanced cancers of the head of billiary additional on the body, and the conversion was carried out with the imposition of palliative anastomoses. In other cases, allowed to refuse to carry out any interventions and thus avoid "vain", the traumatic laparotomy.

GPDR was made 26 patients (16.4%), and in one patient the tumor grows in the branches of the portal vein. The operation was complemented by resec-tion with anastomosis mezentericoportal segment by "end to end". In 20 cases (12,6%) were made palliative anastomosis.

Thus, on the basis of the above, we have developed an algorithm for the diagnosis and treatment of patients with periampullary tumors complicated by mechanical jaundice and created computer program «PATDA» (Periampullary tumors diagnostic algorithm) DGU 02993 from 01.28.2015. According to this algorithm, all patients from the time of their admission to the hospital, after the collection of complaints, anamnesis, determining the level of bilirubin in the blood, carried ultrasound and MRPChG. Depending on the unit billiary addi-tional, bilirubin and presence of cholangitis performed either antegrade or ret-rograde bile-excreting intervention.

For the effectiveness of the treatment was carried out complex diagnostic procedures aimed at identifying possible surgical treatment (MSCTA, duo-denoscopy, a biopsy of the tumor, determination of tumor markers, hemosta-sis). When the negative dynamics of the disease - after decompression of bili-ary additional, as well as the patients refuse further treatment - performs an internal drainage or stenting of biliary additional. In the future, the patient is discharged for systemic or regional chemotherapy with dynamic supervision in the community.

Returning to the figures surgical PAT, it should be noted that these results are disappointing. The development of the set of technological methods and introduction into clinical practice of various pharmacological methods of pre-vention have not led to a significant reduction in the number of postoperative complications, which are diagnosed in the GPDR with a frequency of 32,5 to 100% in-hospital mortality from 3.0 to 57,6% [12,13,32].

The analysis of the unsatisfactory results of treatment of the control group showed that, despite the ability to perform radical surgery (according to laboratory and instrumental methods of treatment), not all of the patients were transferred. Different points of view, the criteria for assessment of treatments led to the fact that often exceeds the volume of surgical treatment, which in the best case, worsens the prognosis of survival, and at worst – led to the death of the patient in the immediate postoperative period [22,25,27,35,38].

In this connection, we have highlighted signs that allow to formulate the most significant factors in determining the prognosis of the disease and the type of the intended treatment. Based on knowledge of the specific weight of each factor, it has been developed computer program «PPGPDR» (Program portability gastropancreatoduodenal resection) DGU 0384 from 08.14.2015, at will improve outcomes PAT.

The data obtained to improve the results of the GPDR in the main group. Of the 26 patients radically operated only three cases (11,5%), there was death, which was caused by complications of the pancreas. Analysis of modern literature has shown that the most important element in the prevention of complications from the stump of pancreas and ensure fa-vorable conditions for the healing of the anastomosis, its tightness is adequate decompression duct system stump cancer in the early postoperative period, which provides a temporary external, internal or external-internal drainage of pancreatic stump [16,19,27,30,34,36,46,48]. Temporary decompression duct system is particularly indicated for patients with unadapted and shareware adapted stump of the pancreas, small and medium diameter of the main pan-creatic duct stump, as well as technical difficulties pancreatoenteroanastomosis formation [41,42,44,45, 49].

Reasons for the need for temporary drainage of pancreatic duct system stump, is to ensure free flow of secretion from the stump, Intraductal maintain-ing pressure on the level of the secretory, prosthetic function of elimination pancreatitis intes-

tinal anastomosis and its isolation from the pancreatic secretion for a period of healing of the anastomosis [7,26].

In this connection, the main group of the GPDR, to prevent the develop-ment of PF performed drainage of the main pancreatic duct.

Depending on the type of drainage, patients were divided into 2 sub-groups - 8 patients (34,3%) underwent a GPDR with internal drainage of the main pancreatic duct, or do without drainage. The second (main) subgroup were 18 patients (65.7%) who fulfilled in the reconstructive phase of external drainage of the main pancreatic duct (Application for invention № IAP 20140342 from 08.21.14).

Indications for external drainage of the main pancreatic duct were: mild "juicy" or dense (fibrosis) parenchyma stump of pancreas, the small diameter of the main pancreatic duct and technical errors overlay pancreaticodigestiv anastomosis.

Clinical efficacy was determined by the amount of discharge of pancreatic juice drainage, installed in the main pancreatic duct, as well as the quantity and quality of discharge to drain installed in the abdominal cavity.

Analysis of the results of the main clinical subgroups showed that the ex-ternal drainage of the main pancreatic duct possible to control the amount of discharge of pancreatic juice. In one (6,3%) cases, there is a transient increase in the level of 6-amylase in the drainage pipe installed in pancreaticojejuno anastomosis to 150 U/l. The correction carried out by conservative therapy al-lowed to achieve the normalization of the patient to 14 days after surgery. A patient in a satisfactory condition was discharged on 18 postoperative day. The cause of death patients (5,6%) became bile peritonitis due to leakage of bile around cholangiostomy due to its migration to the intestine. Acute hemor-rhagic anemia as a result of intra-abdominal hemorrhage due to the develop-ment of PF (type C) led to the death of the first subgroup of patients 2 main subgroups.

Average number of days of stay of patients in hospital core group was 24,4±2,4 bed-days, whereas in the control subgroup, the figure was 31,4 ± 3,4 bed-days. The analysis of the results of surgical treatment in the long term no significant differences in the groups studied did not reveal.

Given the foregoing results, it can be concluded that the effectiveness of methods of external drainage main pancreatic duct is effective from the view-point of reducing the risk of postoperative complications and easy to perform.

Thus, a comparative assessment showed that the developed diagnostic and treatment activities have improved outcomes PAT complicated by MJ, thereby noted a significant decrease in the incidence of postoperative complica-tions and mortality. This indicates that the therapeutic approach to this dis-ease, in the control, and the main group acceptable, although it must continue to seek ways to improve results.

Advanced study in the tactics and techniques in treatment of PAT, com-plicated by MJ, have improved the effectiveness of the treatment. Studies have proved the role and place of instrumental methods in the diagnosis, staging and choice of a method of surgical treatment of patients with perimpullary tu-mors complicated by MJ.

It was proved the usefulness of retroantegrade endobilliary interventions for MJ, depending on the clinical situation.

Developed and specified criteria for prediction of portability radical sur-gery depending on the severity of the patients, the severity of the phenomena of MF and its duration. Improved techniques for surgical interventions, in our opinion, will find a point of contact between supporters and opponents of the drainage system of pancreas for the gastropancreatoduodenal resection .

Conclusions

1. Diagnostics of PAT complicated with MJ should be based on the inte-grated use of laboratory and instrumental diagnostic methods. Using USI on pancreaticobiliary zone with MRPChG allows defining the anatomic structure of BED, tumor block level and choosing the best way to decompress the bile-excreting system, but MSCTA allows defining resectability of tumorous pro-cess.

2. Application of diagnostic laparoscopy to determine feasibility of sur-gical treatment of PAT, complicated with MF, allowed to perform GPDR in 16.7% of cases, apply palliative anastomoses in in 16.7%, and to avoid any surgical intervention in 66.7%.

3. Double-staged PCTHChS technique allows reducing the period for in-ternal BED drainage from 14 days to 8 days and reducing the number of spe-cific complications from 13 to 6%. Endoscopic BED stenting is an effective method of decompression. Efficiency increases in the absence of purulent chol-angitis, expressed biliary hypertension and the technical capabilities of cannu-lation of BDS. Execution of palliative anastomoses is preferable with non-resectable PAT, with projected lifetime of the patient more than 6 months. Per-forming GPDR, taking into account the knowledge of prognostic factors and intraoperative data can reduce the number of post-operative complications from 61 to 15,4%.

4. Results of PAT treatment, complicated with MF depend not only on the nature of tumor formation, size of tumor and stage of the disease, but also on the treatment method. Therefore, in resectable PAT, it is advisable to per-form GPDR: in suspected spread of tumor to the hepatic porta area and/or the presence of metastases of abdominal cavity of small diameter, the use of diag-nostic laparoscopy in conjunction with other diagnostic methods allows choos-ing surgical tactics and avoiding "vain" laparotomy. In non-resectable PAT, application of palliative anastomoses (taking into account the lifetime progno-sis) improves the quality of life.

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FEATURES OF DIAGNOSTICS AND TREATMENT OF PERIAMPULLARY TUMORS COMPLICATED BY MECHANICAL JAUNDICE

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Objective: *To improve results of surgical treatment of periampullary tumors by the development and implementation of diagnostic and treatment algorithm.* ***Materials and Methods:****We analyzed the experience of treatment of 283 patients with periampullary tumors complicated by mechanical jaundice, who were hospitalized in the 2ndclinic of TMA between 2004-2014.****Results:*** *Based on the tactical and technical methods of implementation and intergrad-ing retrograde endobiliary intervention, as well as the use of highly informative diagnostic techniques and improved therapeutic manipulation we developed and implemented an improved diagnostic algorithm.****Conclusions:*** *The diagnos-tic search for periampullary tumors complicated by mechanical jaundice should be based on the integrated use of laboratory and instrumental methods of diagnosis. The use of ultrasonography of pancreatobiliary zone with MRPG allows to define the anatomy of the biliary tract, the level of tumor block and to choose the optimal method of decompression of the biliary system, while MSCT helps to determine the resectability of the tumor process.*

Key words: *periampullary tumors, jaundice, transhepatic endobiliary intervention, gastropancreatoduodenal resection.*