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Surgical treatment of chronic pancreatitis: a comparative analysis of results and quality of life

The aim of the work: to substantiate the nature and scope of surgical intervention in patients with chronic pancreatitis depending on the degree and nature of morpho-structural changes in the pancreatic tissue, and to perform a comparative assessment of the quality of life of the operated patients.

Materials and Methods. The research is based on the analysis of treatment results of 147 patients with various forms of chronic pancreatitis who were treated in a general surgical hospital. Of these, 47 (31.9 %) were operated on. Males accounted for 79.8 %, and females – 20.2 %, aged 30–75 years. The diagnostic program included laboratory and instrumental data, such as ultrasound (US); computed tomography (CT); fibrogastroduodenoscopy (FGDS); and endoscopic retrograde cholangiopancreatography (ERCP). Morphological features of fibrotic forms of chronic pancreatitis were studied. To detect exocrine insufficiency, the level of fecal elastase-1 in the stool was determined, and coprological examination was performed. To detect endocrine function, fasting glucose, HbA1c, and C-peptide were measured. The results of surgical treatment were evaluated as good, satisfactory, and unsatisfactory (according to the Vizik-Komorovski method 1992). The Izbicki pain scale was used to assess pain. Functional status was measured using the European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire (EORTC QLQ C30). Preoperative management of patients was performed using the Fast Track Surgery technology. Statistical processing of the research results was carried out using biostatistical analysis methods, which were implemented in the licensed software packages Microsoft Office 2010 (Microsoft Excel 2010), and methods of variational statistics, and multivariate correlation analysis.

Results. The study results showed that surgical intervention for chronic pancreatitis is recognized as the most effective option for pain control. Our study compares the short-term dynamics of the pain syndrome and quality of life after drainage, combined, and resectional types of surgical interventions. The study systematized the indications for various types of operations depending on the clinical and morphological forms of chronic pancreatitis without a negative impact on the postoperative outcome.

Conclusions. A comparative evaluation of surgical interventions for clinical and morphological forms of chronic pancreatitis based on the intensity of the pain syndrome and the assessment of quality of life using the EORTC QLQ-C30 functional scale showed that resectional and combined operations had the best results. The selection of patients for surgical intervention is resolved multidisciplinarily with the involvement of a gastroenterologist, endocrinologist, and anesthesiologist.

Key words: chronic pancreatitis; surgical treatment; quality of life.

Problem Statement and Analysis of Recent Research and Publications. Controversial and unresolved issues regarding the surgical treatment of complicated forms of chronic pancreatitis remain a current challenge in surgical gastroenterology today [1]. The high level of postoperative mortality (up to 5 %), disability (up to 12 %), and a high frequency of postoperative complications (up to 22 %) have shown virtually no downward trend in recent years [2]. It is known that half of patients with chronic pancreatitis undergo surgical intervention in specialized care centers [3]. According to Kempeneers et al. [4], the surgical treatment of patients with chronic pancreatitis should be aimed at achieving the following objectives: reducing pain syndrome, treating complications of pancreatitis, and preserving the function of the pancreas and its islet apparatus. The indications and timing for surgical intervention are often controversial. The introduction of minimally invasive methods of surgical treatment into clinical practice (endoscopic stenting of the pancreatic duct, endoscopic internal drainage, cystopancreaticojejunostomy by laparoscopic or open

method) did not demonstrate reliable long-term results in improving the condition of patients in the remote postoperative period [5–7]. Therefore, the evaluation of initial clinical data –pain syndrome, location of the lesion (head, body, tail), the presence of an inflammatory "mass" in the head, and consideration of the morphological form of chronic pancreatitis – substantiates the choice of appropriate surgical interventions.

The aim of the work: to substantiate the nature and scope of surgical intervention in patients with chronic pancreatitis depending on the degree and nature of morpho-structural changes in the pancreatic tissue, and to comparatively evaluate the quality of life of operated patients.

Materials and Methods. The study is based on the analysis of treatment outcomes for 147 patients with various forms of chronic pancreatitis who were treated in a general surgical department. Of these, 47 (31.9 %) underwent surgery. The cohort included 79.8 % males and 20.2 % females, aged 30 to 75 years. The diagnostic program included laboratory and instrumental data. Ultrasound (US) was performed using the Alpinion Ecube 15 apparatus with the SC1 – 6H transducer (single-crystal convex high-density probe, 1–6 MHz). Computed Tomography (CT) was performed using the Toshiba Aquilion CX 63 slice (Japan). Fibrogastroduodenoscopy (FGDS) and Endoscopic Retrograde Cholangiopancreatography (ERCP) were conducted in the X-ray operating room using a side-viewing fibroduodenoscope – Olympus JF-1T30 (Japan) – and the MCAplus X-ray unit.

Morphological features of fibrous forms of chronic pancreatitis were studied. The morphological evaluation of the pancreatic tissue and duct included characteristic changes in the parenchyma, stroma, and ductal system. To detect exocrine insufficiency, the level of fecal elastase-1(FE – 1) in the stool was determined, and a coprological examination was performed. To assess endocrine function, fasting glucose, glycated hemoglobin (HbA_{1c}), and C-peptide levels were measured. Significant weight loss was defined as a weight loss exceeding 10 % over the previous 12 months of conservative treatment.

The results of surgical treatment were evaluated as good, satisfactory, and unsatisfactory (according to the Vizik-Komorovski method, 1992).

Pain assessment was carried out using the Izbicki Pain Score [14], which had been developed specifically for chronic pancreatitis. It consists of two subjective components (frequency of pain and intensity of pain, measured using the Visual Analog Scale (VAS)) and two objective components (analgesic consumption and disease-related disability). The final score, obtained by dividing the sum of the ranked values by four, ranges from 0 (no pain) to 100 (severe, debilitating pain).

Functional assessment was measured using the European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire (EORTC QLQ-C30) [15], which includes physical status, role functioning, global quality of life, cognitive, emotional, and social functioning. The score for the functional scale ranges from 0 to 100, with a higher score indicating a higher level of functioning. Postoperative pain and functional scale scores were assessed 12 months after the surgical treatment.

Preoperative patient management was conducted using the Fast Track Surgery technology, which included: avoiding mechanical bowel preparation, no placement of nasogastric and urinary catheters, multimodal analgesia, limitation of the number and duration of drain usage, early enteral nutrition.

Statistical processing of the research results was performed using biostatistical analysis methods implemented in the licensed software packages Microsoft Office 2010 (Microsoft Excel 2010), and methods of descriptive statistics and multivariate correlation analysis.

Results. The comprehensive morphological study of the surgical material allowed us to identify common, uniform morpho-structural changes in the parenchyma and ductal system of the pancreas characteristic of different clinico-morphological forms of chronic pancreatitis in 147 patients. This corresponds to the Marseille – Rome classification (1988; revised 2000) (Table 1).

Based on current recommendations (Marseille-Rome 1988, revised 2000, as well as IAP and ESGE guidelines), the indications for drainage, combined, and resectional surgical interventions were systematized.

The indications for drainage procedures included the following: dilatation of the main pancreatic duct exceeding 5–7 mm, absence of a mass lesion in the pancreas, preservation of the parenchyma outside the duct, absence of marked fibrosis in the pancreatic head, dominant pain syndrome resistant to conservative therapy, pancreatic pseudocysts or post-necrotic collections that communicate with the pancreatic duct, pancreatic fistulas that cannot be eliminated conservatively.

The indications for combined (resection-drainage) procedures: chronic pancreatitis with predominant involvement of the pancreatic head, pain syndrome caused by simultaneous head fibrosis and duct dilatation, compression of the distal common bile duct or the duodenum, pseudotumorous form of chronic pancreatitis without suspicion of malignancy.

Table 1. Clinico-morphological forms of chronic pancreatitis

Form of Chronic Pancreatitis	Clinical Symptoms	Leading Morphological Changes	Surgical Management
Chronic Calcifying Pancreatitis (n=52)	Dominant pain syndrome resistant to conservative therapy	Intraductal calcifications, fibrosis, parenchymal atrophy	Drainage or combined procedures (Partington-Rochelle, Frey)
Chronic Obstructive Pancreatitis (n=25)	The dominant pain syndrome, which is resistant to conservative therapy, is caused by the compression of the distal common bile duct and the duodenum.	Ductal dilatation above the site of obstruction; fibrosis is less pronounced than in calcifying pancreatitis.	Resectional procedures (Beger, Whipple)
Chronic Inflammatory (Infiltrative-Fibrotic) Pancreatitis (n=31)	Persistent pain syndrome is caused by an inflammatory mass in the pancreatic head and head fibrosis.	Predominance of inflammatory infiltration and fibrosis; may mimic a tumor (pseudotumorous form).	Resection-drainage procedures (Beger, Frey), drainage procedures (longitudinal pancreaticojejunostomy), resectional procedures (pancreatoduodenectomy)
Chronic Fibro-Sclerotic (Indurative) Pancreatitis (n=39)	Pain syndrome is caused by simultaneous head fibrosis and sclerosis.	Marked fibrosis and sclerosis of the gland, atrophy, often without significant calcifications.	Resectional, combined procedures

The indications for resectional procedures: suspicion of, or inability to rule out, pancreatic head cancer, severe fibrosis with obstruction of the distal common bile duct and the duodenum, process localization predominantly in the body and tail of the pancreas, segmental duct obstruction with distal dilatation, pseudocysts or calcifications in the distal part of the gland, suspicion of neoplasia in the pancreatic tail, severe pain syndrome in the pseudotumorous form of chronic pancreatitis.

As can be seen from Table 2, out of 47 operated patients with chronic pancreatitis, 24, which constitutes 51.1%, underwent drainage procedures.

Table 2. Types of Surgical Interventions according to Recommendations (Marseille–Rome classification, 1988; revised 2000)

Groups of Surgical Interventions	Nature of Surgical Interventions	Absolute Number, n (Fatal cases)*	Percentage (%)
1	2	3	4
Drainage Procedures	Endoscopic Retrograde Cholangiopancreatography (ERCP) with Sphincterotomy and Pancreatic Duct Stenting;	4	8.5
	Endoscopic cystogastrostomy;	2	4.2
	Puncture, aspiration, and drainage under ultrasound guidance (USG);	6	12.7
	Transgastric cystogastrostomy;	3	6.3
	Longitudinal cystojejunostomy;	5(1)	10.6
	Lateral pancreatojejunostomy.	4	8.5
	Total	**24**	**51.1**
Resectional Procedures	Distal pancreatectomy with cyst;	3	6.3
	Spleen-preserving distal pancreatectomy;	3	6.3
	Pancreatoduodenectomy (PD).	5 (2)	10.6
	Total	**11**	**23.4**

Continuation of the table 2

1	2	3	4
Combined (Resection-Drainage Procedures)	Frey procedure;	4	8.5
	Modified Beger Procedure;	2	4.2
	Beger Procedure;	1	2.1
	Roux-en-Y hepaticojejunostomy (R-Y HJ);	3	6.3
	Frey procedure with Roux-en-Y choledochojejunostomy.	2	4.2
	Total	**12**	**25.5**
	Grand total	**47**	**100.0**

Note. * – Mortality is shown in parentheses.

In 8.5 %, ERCP (Endoscopic Retrograde Cholangiopancreatography), sphincterotomy, and pancreatic duct stenting were performed using the Double Wire Technique (2005). Due to difficult cannulation caused by anatomical features or structural changes of the Vater's papilla (ampulla of Vater) and the terminal part of the common bile duct (choledochus), where the guide wire consistently enters the pancreatic duct, the wire can be left in the duct. The stent is then placed over the retained guide wire in the pancreatic duct (Fig. 1).

14 patients underwent internal drainage procedures: specifically, 3 underwent transgastric cystogastrostomy (Fig. 2), 4 underwent Roux-en-Y lateral cystopancreatojejunostomy (Fig. 3), 5 underwent longitudinal cystojejunostomy, and 2 underwent endoscopic cystogastrostomy (Fig. 4).

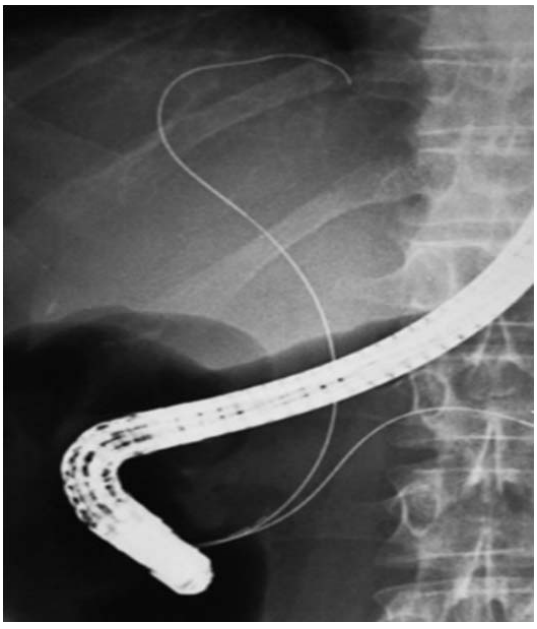

Fig. 1. ERCP, sphincterotomy, pancreatic duct stenting.

11 patients, representing 23.4 %, underwent resectional procedures. Among them, 10.6 % received pancreatoduodenectomy – the Whipple procedure (Fig. 5).

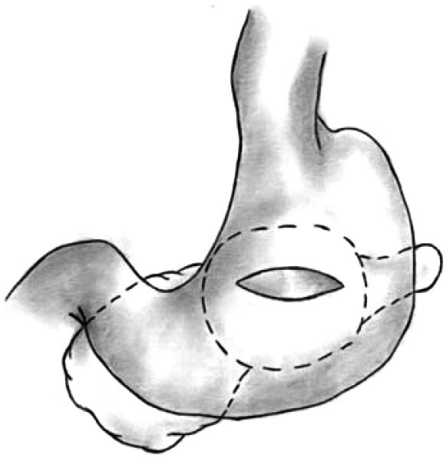

Fig. 2. Transgastric cystogastrostomy.

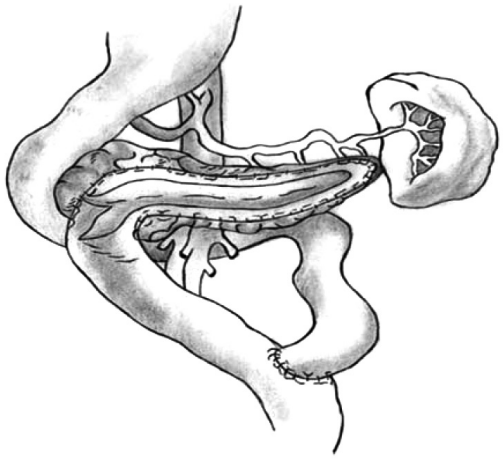

Fig. 3. Lateral Cystopancreaticojejunostomy.

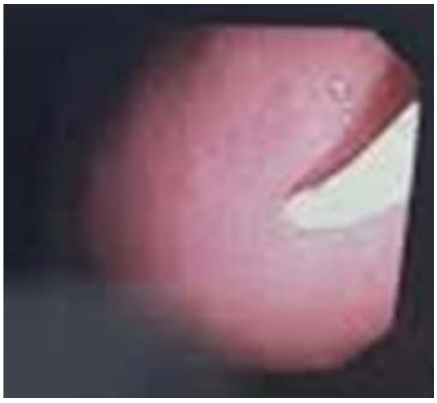

Fig. 4. Endoscopic cystogastrostomy.

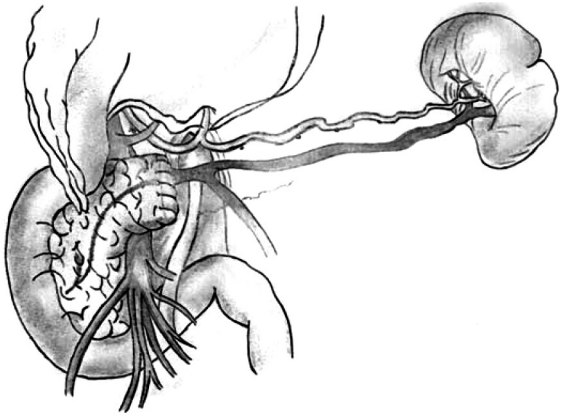

Fig. 7. General view of Distal Pancreatectomy.

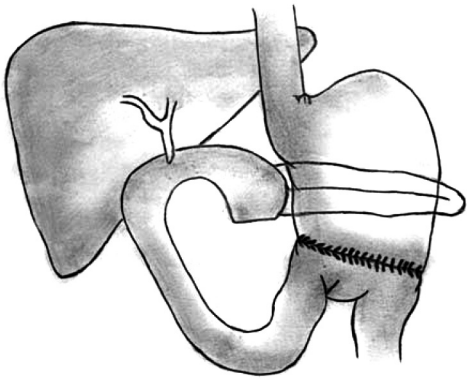

Fig. 5. Pancreatoduodenectomy.

6 patients (12.6 %) underwent Distal Pancreatectomy (Fig. 6, 7), including 3 with distal resection and a pancreatic cyst, and 3 with distal resection and splenectomy.

Combined (resection-drainage) procedures were performed in 25.5 % of patients. We give preference to the Frey Procedure (8.5 %) (Fig. 8) and the Modified Beger Procedure (4.2 %) (Berne Procedure) (Fig. 9).

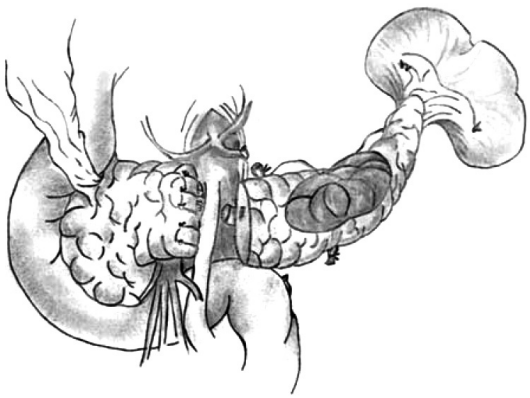

Fig. 6. Stages of Distal Pancreatectomy with localized lesion.

In cases of chronic pancreatitis with severe pain syndrome and involvement of the pancreatic head causing common bile duct stenosis (with jaundice), Roux-en-Y hepaticojejunostomy was performed in 6.3% to relieve biliary obstruction, and Frey procedure with Roux-en-Y choledochojejunostomy in 4.2 %. The overall rate of postoperative complications was 17.02 %. After drainage procedures – 4.17 %, after resectional procedures – 36.36 %, and after combined procedures – 25 %.

Analysis of 30-day survival and 30-day mortality showed that out of 47 operated patients with complicated forms of chronic pancreatitis, 30-day survival was 93.6 %, and 30-day mortality was 6.4 %. The cause of death in 2 cases was anastomotic leakage after pancreatoduodenectomy, and in 1 case – hemorrhage into the cyst cavity, where bleeding control using endovascular technology was ineffective.

After 24 drainage procedures, 100 % 30-day survival was noted. Conversely, after 11 resectional procedures, 30-day mortality was 18.2 %, and with 12 combined procedures, 30-day mortality was 8.3 %.

Weight loss in the postoperative period (12–36 months) occurred in 68 % of patients who underwent drainage procedures, compared to 27.6 % after resectional procedures and 38.4 % of patients after combined procedures on the pancreas.

Analysis of postoperative pain using the Visual Analog Scale (Table 3) revealed a 2.6-fold reduction in postoperative pain compared to preoperative indices ($p<0.005$). The disability score in the postoperative period decreased 4.4-

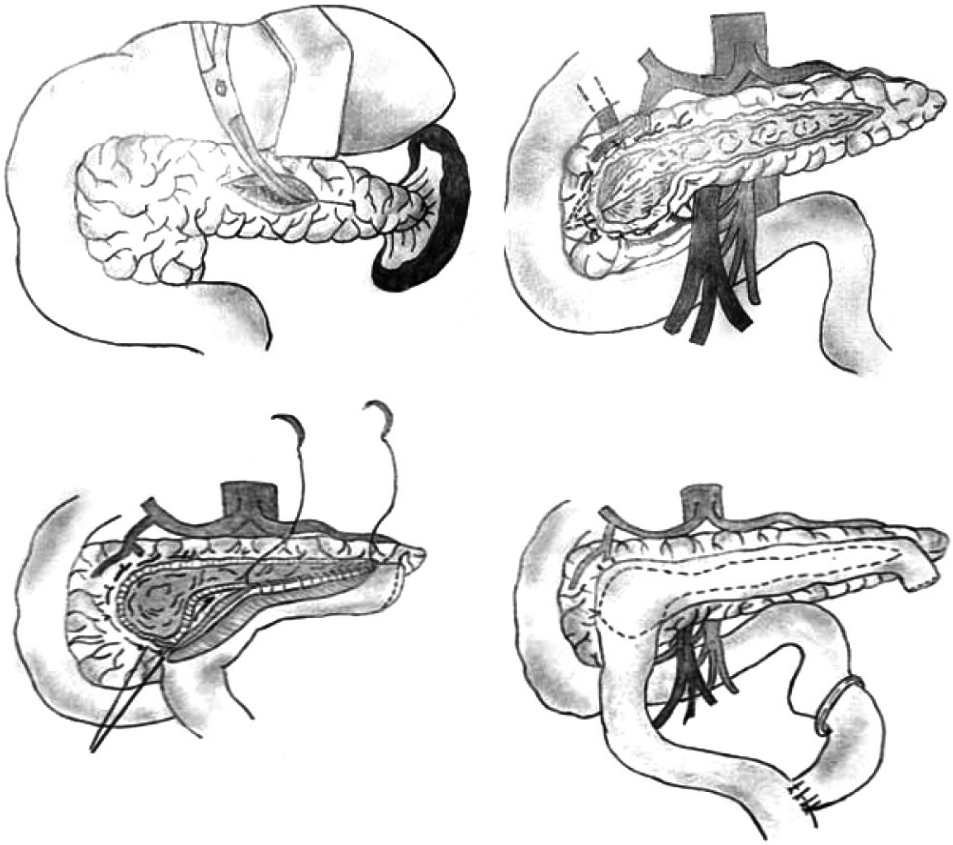

Fig. 8. Stages of the Frey Procedure.

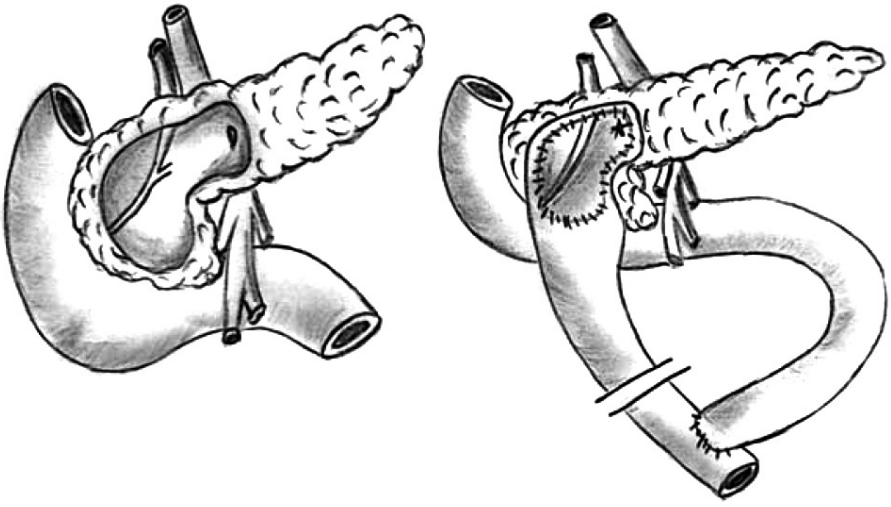

Fig. 9. Modified Beger Procedure (Berne Procedure).

fold ($p<0.005$) compared to the preoperative index, and the frequency of monthly pain attacks decreased 6-fold ($p<0.005$) postoperatively. It should be noted that the frequency of analgesic administration after surgery decreased 3.8-fold ($p<0.005$) compared to the preoperative period. Thus, the total postoperative Izbicki Pain Score was 19.5 compared to the preoperative score of 58.7 ($p<0.005$). Analyzing the Global Quality of Life, an increase in scores was noted from 38.3 before surgery to 79.2 in the postoperative period ($p<0.005$). The work ability score increased from 42.5 to 78.3 ($p<0.005$), cognitive functioning from 58.2 to 83.5 ($p<0.005$), emotional functioning

Table 3. Postoperative pain (according to the Izbicki pain scale) and functional status (according to the EORTC QLQ C30 functional scale) in patients before and after surgery for chronic pancreatitis during a follow-up period of 12–36 months

Parameter	Preoperatively (n=47) Median (range)	Postoperatively (n=34) Median (range)	p-value
Visual Analog Scale (VAS), score	7.2 (4.5–9.8)	2.8 (0.5–5.3)	<0.005
Disability/Incapacity, days/month	18.5 (10.0–28.0)	4.2 (0.0–12.0)	<0.005
Frequency of pain attacks, episodes/month	12.0 (6.0–22.0)	2.0 (0.0–6.0)	<0.005
Analgesic consumption, doses/week	21.0 (12.0–35.0)	5.5 (0.0–14.0)	<0.005
Total Pain Score (Izbicki Pain Score)	58.7 (42.0–78.0)	19.5 (5.0–38.0)	<0.005
EORTC QLQ-C30 Functional Scale	38.2 (25.0–52.0)	76.8 (58.0–92.0)	<0.005
Work ability score	42.5 (20.0–60.0)	78.3 (55.0–95.0)	<0.005
Physical functioning score	46.8 (28.0–65.0)	81.7 (62.0–96.0)	<0.005
Cognitive functioning score	58.2 (35.0–75.0)	83.5 (65.0–95.0)	<0.005
Emotional functioning score	41.7 (22.0–58.0)	76.9 (58.0–92.0)	<0.005
Global quality of life (QoL) score	38.3 (18.0–55.0)	79.2 (60.0–95.0)	<0.005
Social functioning score	44.6 (25.0–62.0)	82.4 (63.0–96.0)	<0.005

from 41.7 to 76.9 ($p<0.005$), and social functioning from 44.6 to 82.4 ($p<0.005$).

The comparative analysis of surgical outcomes for chronic pancreatitis using three main types of procedures – drainage, resectional, and combined (resectional-drainage) (Table 4) – demonstrates a statistically significant difference between the groups for majority of the evaluated parameters, suggesting the superiority of certain treatment methods. Resectional operations demonstrated the best results across all metrics characterizing pain intensity and associated disability. For all these parameters (Total Pain Score, VAS score, disability days, frequency of pain attacks, analgesic consumption), the results showed a highly statistically significant difference ($p<0.005$), confirming the clear advantage of resectional procedures in controlling pain syndrome and restoring work ability. The evaluation of Quality of Life (QoL) using the Functional Scale EORTC QLQ-C30 also confirmed the superiority of resectional procedures. The highest median score (89.5 points) was recorded in the resectional group (n=8), which is significantly higher than in the drainage group (74.6 points) (n=17) and the combined group (77.5 points) (n=9). Work ability, physical, emotional, and social functioning scores were all statistically significantly ($p<0.005$) higher after resectional interventions. This indicates better functional recovery and overall quality of life for patients in this group. The data clearly indicate that resectional operations (n=8) are the most effective for achieving a lasting and pronounced analgesic effect and a significant improvement in Quality of Life parameters in patients with chronic pancreatitis, compared to drainage (n=17) and combined (n=9) procedures. The analysis of complications, namely pancreatic insufficiency, yielded different results:

A reduction in fecal elastase-1 (FE-1) levels (normal >200 μg/g) indicates exocrine insufficiency, manifesting as maldigestion and steatorrhea. After drainage procedures over 12–36 months, the reduction in FE-1 is minimal. This decrease is more related to the progression of the underlying disease than to the surgery itself. The risk of developing or exacerbating insufficiency is the lowest. Pancreatoduodenectomy (PDR) involves a large volume of pancreatic parenchymal resection, leading to a significant reduction in enzyme-producing cells.

The frequency of developing or exacerbating exocrine insufficiency is the highest, often requiring continuous pancreatic enzyme replacement therapy (PERT).

The influence of different operational interventions on glucose and glycated hemoglobin levels was evaluated 12–36 months post-operation.

The risk of developing new-onset diabetes is lower than with PDR (implying the study uses resectional procedures other than standard PDR, such as pylorus-preserving PDR or distal pancreatectomy, or comparing PDR to other non-resectional operations), but higher than with pure drainage procedures.

Discussion. Surgical intervention is widely recognized as the most effective option for pain

Table 4. Changes in Izbicki Pain Score and Functional Scale (EORTC QLQ C30) in Patients After Different Types of Chronic Pancreatitis Operations at 12–36 Months

Parameter	Drainage procedures (n=17) Median (range)	95 % CI	Resectional procedures (n=8) Median (range)	95 % CI	Combined (resectional-drainage) procedures (n=9) Median (range)	95 % CI	p-value
Visual Analog Scale (VAS) score	3.4 (1.2–5.8)	2.5–4.3	1.5 (0.5–3.2)	0.7–2.3	2.9 (0.8–5.3)	1.8–4.0	<0.005
Disability/Incapacity, days/month	5.5 (1.0–14.0)	3.6–7.4	2.0 (0.0–7.0)	0.5–3.5	4.8 (1.0–12.0)	2.9–6.7	<0.005
Frequency of pain attacks, episodes/month	2.8 (0.5–7.0)	1.7–3.9	0.8 (0.0–3.5)	0.1–1.5	2.2 (0.0–6.0)	1.0–3.4	<0.005
Analgesic consumption, doses/week	7.2 (1.0–16.0)	4.8–9.6	2.8 (0.0–9.0)	0.9–4.7	6.0 (1.0–14.0)	3.7–8.3	<0.005
Total Pain Score (Izbicki)	23.8 (9.0–42.0)	18.2–29.4	10.5 (5.0–25.0)	6.1–14.9	20.8 (6.0–38.0)	14.8–26.8	<0.005
Functional Scale (EORTC QLQ-C30)	71.2 (58.0–86.0)	66.4–76.0	85.8 (72.0–92.0)	79.2–92.4	74.8 (60.0–89.0)	68.5–81.1	<0.005
Work ability score	72.8 (55.0–86.0)	67.3–78.3	87.5 (74.0–95.0)	80.8–94.2	75.8 (60.0–90.0)	69.1–82.5	<0.005
Physical functioning score	76.5 (62.0–88.0)	70.8–82.2	90.3 (80.0–96.0)	84.7–95.9	79.4 (65.0–92.0)	72.9–85.9	<0.005
Cognitive functioning score	80.8 (65.0–90.0)	75.4–86.2	88.5 (76.0–95.0)	81.9–95.1	82.8 (68.0–93.0)	76.2–89.4	<0.178
Emotional functioning score	71.5 (58.0–84.0)	66.1–76.9	86.8 (72.0–92.0)	79.6–94.0	74.6 (60.0–88.0)	67.8–81.4	<0.005
Global Quality of Life (QoL) score	74.6 (60.0–88.0)	69.1–80.1	89.5 (77.0–95.0)	82.8–96.2	77.5 (63.0–92.0)	71.2–83.8	<0.005
Social functioning score	78.2 (63.0–90.0)	72.6–83.8	90.5 (78.0–96.0)	84.2–96.8	80.6 (66.0–93.0)	74.3–86.9	<0.005

control in chronic pancreatitis (CP) [13]. The frequency of surgical activity for various forms of CP varies significantly between specialized centers and general surgery units: specialized pancreatology centers: 40 % to 70 %, general surgery departments: 20 % to 40 % [16]. In recent years, there has been a noticeable shift in surgical strategy: the trend is moving away from purely resectional procedures (e.g., Pancreatoduodenectomy – PD) towards combined (resectional-drainage) operations (e.g., Frey, Beger, Modified Beger procedures). This shift is driven by the equivalent analgesic effect and favorable postoperative quality of life outcomes achieved with these organ-sparing hybrid procedures [4].

Better pain control and quality of life may be associated with early surgical intervention, with the average interval between the onset of symptoms and surgery being reported as less than 28 months [17].

Since most CP complications can be managed by both endoscopic and surgical methods, the optimal approach for each patient must be determined by a multidisciplinary team, including gastroenterologists, radiologists, endoscopists, and surgeons.

It is important to compare the short-term dynamics of pain syndrome and quality of life following drainage, combined, and resectional types of surgical interventions, as well as to systematize the indications for different types of operations based on the clinical and morphological forms of chronic pancreatitis, aiming to optimize patient selection without negatively impacting the postoperative outcome.

Conclusions. Comparative evaluation of surgical interventions for clinical and morphological forms of chronic pancreatitis based on the intensity of the pain syndrome and quality of life assessment using the

EORTC QLQ-C30 functional scale showed that resectional and combined operations had the best results. Patient selection for surgical intervention is decided multidisciplinarily with the involvement of a gastroenterologist, endocrinologist, and anesthesiologist.

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Author Contributions. Dziubanovskyi I. Ya. – study aim, work concept, and research design. Svystun R. V. – data collection. Polyatsko K. H. – data collection and statistical analysis. Dziubanovskyi O. I. – data collection and statistical evaluation of results. Onyskiv M. O. – data collection.

A promising direction for further research. In the surgery of complicated forms of chronic pancreatitis is pancreatic volumetry and its role in selecting the volume and method of operations.

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ХІРУРГІЧНЕ ЛІКУВАННЯ ХРОНІЧНОГО ПАНКРЕАТИТУ: ПОРІВНЯЛЬНИЙ АНАЛІЗ РЕЗУЛЬТАТІВ ТА ЯКОСТІ ЖИТТЯ

Мета роботи: обґрунтувати характер й об'єм операційного втручання у пацієнтів із хронічним панкреатитом залежно від ступеня і характеру мофроструктурних змін у тканині підшлункової залози, порівняти оцінку якості життя оперованих пацієнтів.
Матеріали і методи. В основі роботи покладено аналіз результатів лікування 147 хворих із різними формами хронічного панкреатиту, які лікувались у загальнохірургічному стаціонарі, з них прооперовано 47 (31,9 %). Чоловіків було 79,8 %, жінок – 20,2 % у віці 30–75 років. Діагностична програма дослідження включала лабораторні та інструментальні дані, зокрема УЗД, комп'ютерної томографії, фіброгастродуоденоскопії, ендоскопічної ретроградної холангіопанкреатографії (ЕРХПГ). Вивчено морфологічні особливості фіброзних форм хронічного панкреатиту. З метою виявлення екзокринної недостатності визначали рівень фекальної еластази-1 в калі, проводили копрологічне дослідження. Для виявлення ендокринної функції – вимірювали глюкозу натще, HbA1c, С-пептид. Результати хірургічного лікування оцінювали як добрі, задовільні та незадовільні (за методикою Vizik – Komorovski, 1992). Для оцінки болю використовували шкалу болю Ізбіцького. Оцінку за шкалою функціонування вимірювали за допомогою опитувальника якості життя Європейської організації дослідження та лікування раку (EORTC QLQ C30). Передопераційне ведення пацієнтів проводилося із застосуванням технології Fast Track Surgery. Статистичну обробку результатів дослідження проводили за допомогою методів біостатичного аналізу, які були реалізовані в пакетах ліцензійного програмного забезпечення Microsoft Office 2010 (Microsoft Excel 2010) та методів варіаційної статистики, багатофакторного кореляційного аналізу.
Результати. З результатів дослідження видно, що хірургічне втручання при хронічному панкреатиті визнано найефективнішим варіантом для контролю болю. У роботі проведено порівняння короткострокової динаміки больового синдрому та якості життя хворих після дренуючих, комбінованих та резекційних типів операційних втручань. У дослідженні систематизовано показання до різних типів операцій залежно від клініко-морфологічних форм хронічного панкреатиту без негативного впливу на післяопераційний результат.
Висновки. Результати порівняльної оцінки хірургічних втручань з приводу клініко-морфологічних форм хронічного панкреатиту за інтенсивністю больового синдрому та якості життя за функціональною шкалою EORTC QLQ-C30 показали, що резекційні та комбіновані операції мали найкращі результати. Відбір пацієнтів для операційного втручання вирішується мультидисциплінарно із залученням гастроентеролога, ендокринолога, анестезіолога.

Ключові слова: хронічний панкреатит; хірургічне лікування; якість життя.

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